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ABSTRACT

This document, the second of two volumes, is a continuation of papers that represent work in career development research at Harvard University. Section III, Choosing as Figure in the Styling of Life, Section IV, Conceptual Integration, and Section V, Professional Implications, include the following chapters: (11) A Return to Models: Differentiation and Integration in Personality Development, (12) The Organization and Intention of a Proposed Data and Educational System for Vocational Decisions, (13) Aspects of Imagination in the Learning Process, (14) Recent Developments and Current Prospects in Occupational Fact Mediation, (15) The Forms of Language and the Forms of Life in the Conduct of Inquiry, (16) Vocational-Technical Education and Occupational Guidance, (17) Liberation Through Education, and (18) Predicament, Problem, and Psychology. Three appendixes and a 33-page reference list are included. Volume I of these papers is available as VT 013 232. (GEB)

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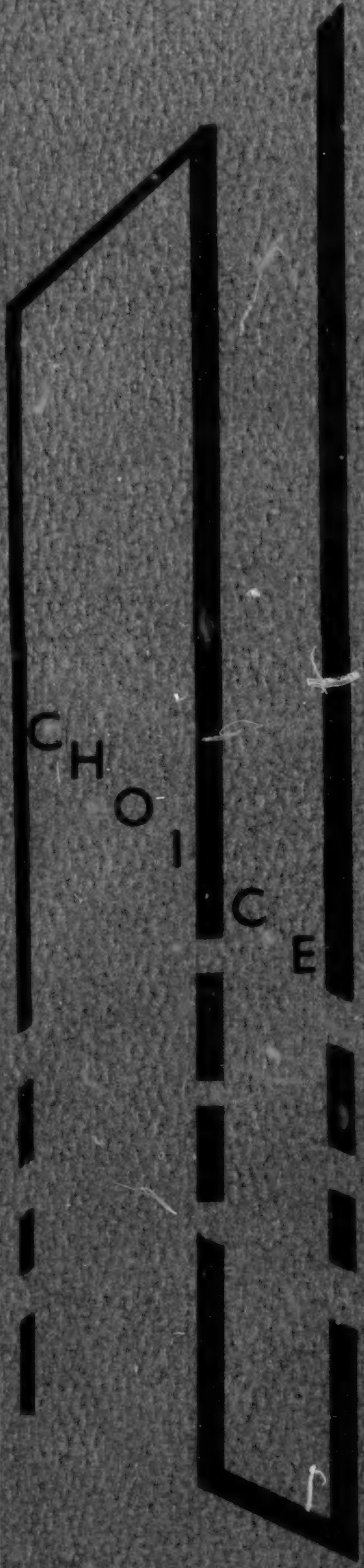

THOUGHT, CHOICE and ACTION:

PROCESSES OF EXPLORATION AND COMMITMENT IN CAREER DEVELOPMENT

by:

DAVID V. TIEDEMAN & GORDON A. DUDLEY

including contributions by:

FRANK L. FIELD, JR.
WALLACE J. FLETCHER
CHRIS D. KEHAS

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VOLUME 2

THOUGHT, CHOICE, AND ACTION

Processes of Exploration and Commitment in Career Development.

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SECTION III

CHOOSING AS FIGURE IN THE STYLING OF LIFE

Overview

The preceding section exemplified the process of reappraisal which characterized the work of Tiedeman and his immediate colleagues and students during the period between the College Board monograph and the project comprising the substance of this third section, the Information System for Vocational Decisions. In Chapter 6, Tiedeman reviewed the development of his ideas immediately prior to 1964-1965 and, in Chapter 9, reported on the personal experiences during that year in which he was simultaneously student, administrator, and scholar in the Harvard Center for Research in Careers.

Section III begins with Tiedeman noting the two new directions which the experiences of that academic (1964-1965) year gave to his interests in the "personally determined career." As we might anticipate from the point of view which he has outlined in previous statements of this collection, those two directions consist of an increasing regard for (1) the complex interplay among preconscious, unconscious, and conscious processes of thought in the personal determination of career development and (2) time and sequence as the context, and substance, of those processes.

In Chapter 12 Tiedeman presents the project which represents the focus of his current work: the Information System for Vocational Decisions, a project of the Harvard Graduate School of Education, the New England Education Data Systems, and the Newton School Department. The development of this system represents not only an effort to influence current practice by direct example, an influence previously unachievable as noted in Chapter 9 but, in addition, represents through the implementation of current assumptions and findings an explicit analogue for the testing and re-formulation of conceptual issues basic to the general theory of career development within which Tiedeman is working at the present time.

In Chapter 13 Dudley outlines the particular orientation and strategy of investigation that he has proposed in order to carry out an exploratory investigation of the "symbolic processes of ego synthesis" discussed in Chapter 10. This proposal for the study of humor, dreams, and figurative speech as aspects of imagination in the learning process represents an alternative means for charting processes of thought central to Tiedeman's general theory.

Each of these proposals anticipates with some care issues of conceptualization, investigative strategy, and operational implementation which, in turn, imply more general consideration of such broad topics as the relation between the logics of creative exploration and scientific confirmation. Each proposal anticipates close consideration of the nature of "clinical" evidence, inference, and process; each, the relation between theory and data within the context of focal and subsidiary modes of knowing. Each addresses in its own way a concept of time as "the presence of the past in the potentiality of the future."

These are the issues that have emerged with increased greater clarity and importance during the progress of both explorations. Indeed, a continuing dialogue devoted to the clarification of these issues and their implications for both theory and practice represents a major intellectual resource and contribution of the studies. These are, finally, the broad issues which provide the substance of the discussions of Section IV: a more general consideration of models, metaphors, and analogues as reciprocal dimensions of the languages of human conduct and the conduct of human inquiry.

CHAPTER 11

A RETURN TO MODELS: DIFFERENTIATION AND INTEGRATION IN PERSONALITY DEVELOPMENT*

Overview

Sections I and II portray the development of our thought which progressed from efforts to predict an elected educational or vocational alternative (which is ordinarily erroneously referred to as predicting a "choice" without examination of whether it actually was a choice or not) to a delineation of the processes of exploration and commitment in career development. That delineation took us through consideration: 1) of differentiation and integration in relation to a single patterning of choosing during time of discontinuity, 2) to self-concept theory, 3) to stipulation of a process-like theory of purposeful action, and 4) to the insertion of personal determination into career development during the course of more general psychological development. Creativity became the fifth and primary subject of interest as we movedto designate the processes of exploration and commitment during career development.

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*This paper is based in part on work of David V. Tiedeman and Frank L. Field "Measurement for Guidance," in Whitla, Dean, (Ed.) Handbook of Measurement for Education, Psychology, and Sociology, Boston, Addison-Wesley, (in press) (HSCD No. 55) and in part on a paper by David V. Tiedeman, "Career Pattern Studies: Current Findings with Possibilities " in Landy, Edward, and Kroll, Arthur M. (Eds.), Guidance in American Education III: Needs and Influencing Forces. Cambridge, Mass. Harvard University Press, 1966. pp. 116-128. (Harvard Studies in Career Development No. 40).

We hope to remain articulate about creativity in relation to career development. In order to do so, we return once again to models. Models allow us to specify the structures in our thought which we are attempting to bring into more powerful and articulate form by description of our process of thinking as we choose in the construction of this account.

We stated in Chapter 2 our stipulation of a model of career development where we explicitly laid out a paradigm of differentiation and integration in decision-making. That paradigm was largely considered in relation to a single choice. The vocational psychologist's efforts to predict vocational choice were then largely dedicated to predicting the vocation which a person would have as a life-time activity. However, even in Chapter 2, we indicated that vocational activity which is subordinate to the fashioning of a career involves a multitude of decisions each one of which can be understood in terms of the structure of our paradigm of differentiation and integration. However, we could not at that time indicate very explicitly a structure (or model) in terms of which differentiation and integration in a single instance of decision-making can be articulated through that same paradigm of differentiation and integration into a superordinate structure for describing the general, and presumably accumulative effects, which we know as those of personality development. This is the step we attempt in this Chapter.

In order to apply the paradigm of differentiation and integration in decision-making which we have stipulated in Chapter 2 to the area of personality through the means of career development, we first imagine not one, but several, discontinuities which are involved in the thought and choosing processes taking place during self-development. We attempt to prompt your imagination of such a condition in the first section of this Chapter. This first section consists of a structural statement in which we are trying to bring to the fore the process by which structure and process are themselves in interaction during career development and in turn during the "settling" of career development into general personality development. We attempt to single these processes out for you by means of two models, a union and induction. Once we bring the process of conceiving structure-process of differentiation and integration in single career and life decisions to the fore, we then go on to speak more specifically of first the mechanisms of consciousness involved in personal determination in career development and then of time and sequence in achieving higher level self-functioning in career and personality development.

Our discussion of creativity in Chapter 10 provides the context for study and emergence of career in personality through the ordination of single career discontinuities. The general discussion of the articulation of differentiation and integration in relation to personality development makes choosing the central figure in the process through which personal determination emerges in career.

Unconscious, preconscious, and conscious experience merges in the elaboration of awareness that characterizes the process of choice --

and the process of reflection upon choice. Hence, in the second part of this Chapter, we continue the exploration of these aspects of mind which were started in Chapter 10 and attempt to put them into a framework in which explicit scientific study might be undertaken.

This aim, in its turn, brings the concept of "time" under discussion. The scientist, qua scientist, tends to use time frequently, perhaps even primarily, as an impersonal marker of events. For the person engaged in a process of choosing, however, time is at once a marker of his personal history of events, a resource of his which he attempts to use to his advantage -- and a figment of his imagination, the sequence of which he must controvert if he is to achieve an imagined advantage. In short, the act of doing through which we come to know how to do -- as that act is experienced and can become a subject of scientific inquiry -- becomes a new focus for the collaboration between person and scientist. We discuss these processes of mind and time more fully in this Chapter.

The Development of Personality Through Choosing

Differentiation and Integration in Personality Development. Chapter 5 delineated the concept of purposeful action in relation to understanding self as process. Section V will deal with the cultivation of purposeful action through a program of Guidance organized within the framework of education. We propose here a move whereby we may integrate paradigms 1) of purposeful action (Chapter 5) and 2) of differentiation and integration (Chapter 2).

Purposeful action can take place during differentiation and integration in a single career or life discontinuity if the person is able to foresee his opportunities, his desires, and his capacities while he is involved in anticipation of the discontinuity. The organization of such predictions can in turn give rise both to a cognitive mapping of a person's beliefs, and to an attitude of confidence which permits a person to embark upon the course elected. The experience obtained, and possibly examined during implementation of previous anticipations, gives rise to further refinements in the organization of prediction and action. Furthermore, this experience can lead to confidence, to doubt, or to despair in relation to the goal(s) thereby evolving.

A person's feelings about his possibilities in life fluctuate. They do so with mood, success, organization contexts, others' actions, roles, etc. One is always in a dynamic condition with regard to the anticipation and implementation aspects of purposeful action. Consider again the step of exploration during anticipation, as defined in the paradigm of differentiation and integration (Chapter 2). Exploration was characterized as a condition of considering alternative possibilities in a disorganized emotional way. It was also noted that a psychological field could be imagined (and hence pre-experienced) in relation to each predicted alternative. This psychological field is the vehicle of the general condition which hangs together in some organized fashion and thus lends continuity to the behavior of a person even though at the same time some aspects of the field become available for modification in relation to the discontinuity then under consideration.

If the paradigms of purpose and of differentiation and integration are to have generality, we must now think of the psychological field during a discontinuity, and of the (perhaps) new organization which is being imposed upon that field through absorption of the structure of a new discontinuity. Figure 2.1 suggests that in the aspect of anticipation, organization passes through inception during exploration, then into existence during crystallization, and finally, gives rise to choice, clarification of objective, and its likely consequences. During implementation, purpose leads to entry into a discontinuity (during induction) in an attitude of inferiority. This in turn gives way to the assertiveness of superiority during the step of reformation, and possibly becomes more neutralized through the step of integration if presence in the particular process is maintained. Try to amplify with us the condition of generalization of one organization into the psychological field or personality by thinking in terms of eight discontinuities which are experienced in sequence.

Differentiation and Integration in Relation to Multiple Discontinuities. The imagined paradigm of development in personality through differentiation and integration conceived as a problem-solving attitude must obviously be considered as ideal if it is to be conceived in its entirety. Therefore, suppose that each of the eight discontinuities progresses smoothly through all of its possibilities. Furthermore, imagine one step of each of the eight processes as taking place at any of the eight intervals of time so that the effect in a given time interval is akin to that of a cascade, i.e., integration step of an early process associated with reformation step of the next earliest process, etc. In the personality development of any person, he may not experience all of the steps with regard to some or all of the discontinuities through which he has passed. Furthermore, the person may be on the same step with regard to several discontinuities at the same time. For instance, while in junior high school, a student is likely to be in the step of exploration with regard to the discontinuities of college, major in college, work, etc.

Logically it would appear that for any one person, each stage has its own power relative to the other stages. By power we mean impact upon the individual's thought and/or action. For example, if a student has two or more equally attractive goals that are not necessarily mutually exclusive -- say winning a football letter and obtaining reasonably good high school grades -- there is a strong likelihood that one or the other goal may affect the choice of action too much or too little simply because the two discontinuities are at different stages of development. The student may be in junior high, as yet too young and small for the varsity, but already a good student and a fair athlete for his age. The clearly crystallized image of self-in-letter-sweater could well affect his behavior more than the vaguely desirable notion of pleased parents congratulating an honor student in shirtsleeves. Let us hasten to agree with the reader who objects, "But some kinds of boys couldn't care less about football letters -- they study for the pure joy of it." This is precisely our point; personality differences can be discussed in terms of the particular pattern of alternative future situations various individuals have predicted at all, and chosen to pursue above all else. Of course there are myriad alternatives that could have been given priority! We are trying to equate the term personality and the concept of an ever-changing, yet basically consistent, priority system. Then it becomes possible to state that personality (priority) affects all steps in differentiations and integration during problem-solving just as it affects the evolution of purpose; both paradigms represent the same process, specifically that by which personality and situation affect behavior. This also specifies whatever pro active condition exists in personality.

Although we cannot depict the interrelationship of organization and psychological fields which is implied in the experiencing of these seven steps simultaneously, two analogies come to mind which may still further enlarge your understanding.

Model I: A Union. The first analogy is that of a union. Seven states exist simultaneously. Their union is what they have in common even though each of the elements has other aspects unique from the aspects of all others. In such a union, the organization of possibility associated with discontinuity 2, in a condition of reformation, has at least one thing in common with the organization of possibility associated with the condition of integration experienced in connection with discontinuity 1. These common things are aspects of personality organization. They are a part of a common organization and psychological field denoted in any one of the steps of the process of differentiation and integration experienced in connection with problem solving.

Model II: The Induction Process. A second analogy is the process of induction as it is used in mathematics. Imagine a linguistic frame more general than the specifics of the organizations of possibilities as experienced simultaneously in the seven steps of seven different continuities. The frame must of course have an internal consistency or else it will not be more general than its specifics. The frame is likely to have structure as noted by Bruner (1962). Such a structure implies that all relevant specifics are contained in a more general concept but that the general concept is not formally defined by the specifics. An act of induction is required for a more general concept to exist. The elements of the structure will be premises and statements of interrelation among certain of the premises, so that the operation of the premise is also specified. More than one frame may be consistent with a given set of specifics. Furthermore, the alternative explanations may or may not be conceived similarly by the person experiencing the events on the one hand, and on the other hand an observer conversing with the person. This fact will be dealt with in greater detail in Section V. At this time, we simply note a set of basic concepts and the operations which can be performed with these concepts either by the person experiencing the condition or by a second party attempting to assess the condition of the first party.

In considering differentiation and integration in personality development it is useful to consider the discontinuities which a person is experiencing, and/or considering, and to deal with the steps in the process of differentiation and integration of multiple purposes which may yet occur in each instance of problem-solving. This is the issue we have just discussed. It is also useful to consider the history of the person with regard to the process of differentiation and integration in problem-solving. A history of success with each of the seven steps experienced in the interval t_6 is likely to lead to competence and confidence in the meeting of more advanced steps with regard to 6 of the 7 discontinuities active in interval t_7 and in initiating exploration with regard to discontinuity 7. In other words an experience of integration with regard to discontinuity (8) can help the attainment of integration with regard to discontinuity 7. Similarly, success in reformation with regard to discontinuity 1 can facilitate the attainment of the step of reformation with regard to discontinuity 2. This effect can be traced all up the steps in each of the discontinuities imagined in intervals t_6 and t_7. In general, the person's experience with regard to a specific step in all previous discontinuities can bear upon his experience with that step in his meeting of the next discontinuity. Experience of failure in earlier problems can have just the opposite effect.

Personality Development as a Second-Order Effect. Our models place personal determination during career development into the psychological field of the model of differentiation and integration of a single discontinuity outlined in Chapter 2. Such ordination of personal determination essentially makes it be a second-order effect. We do not mean to give personal determination and its related personality evolvement a lesser place of importance by calling it a "second-order" effect. To the contrary, we place personal determination and its influence on, and reciprocation with, personality into a superordinate position to the processes of differentiation and integration involved with the experiencing of a single discontinuity. However, our models indicate that by doing so we also make it possible to talk about the differentiation and integration of this second-order effect itself. The next two sections speak more fully first to the conscious processes involved in personality development so defined, and then to the logic of time and sequence involved in the achievement or ordination in general.

Unconscious, Pre-Conscious, and Conscious Mechanisms in the Second-Order Effect of Personal Determination in Career Development

The achievement of personal responsibility requires the exercise of choice in the assimilation of the discontinuities of career development within the continuity of personal development. The adequate exercise of choice requires the rather full use of thought, in part a conscious process. For this reason, the primary term in our analysis of the personally-determined career has become that of thought.

Bordin, Nachman, and Segal (1963) have criticized Tiedeman for drawing "...a version of self perception almost devoid of emotional and motivational influences" (p.108). The criticism is valid in relation to that aspect of this work which they reviewed. As indicated in Chapter 1, Tiedeman's initial efforts to understand vocation choice, which they reviewed, were largely those stemming from statistical representations of the facts of prior elections. During these initial investigations the process of choosing remained unanalyzed. Now, however, Tiedeman's conception of thought in choosing as the primary means for the development of thought in action, places the person into relation with his future in a way which makes it impossible to ignore emotional and motivational influences.

Reasoning represents the efforts to make explicit what have previously been only tacit understandings (Polanyi, 1958). Explicit understandings are powerful when they are also credible. Scientists strive to make tacit understandings explicit. People strive to make tacit understandings explicit in the management of their lives. Counselors strive 1) to help persons cultivate tacit understandings and 2) to facilitate emergence of the person's explicit understanding of his formerly tacit understandings, particularly those he has about his career. In short, the making of tacit (pre-conscious) understanding explicit (conscious) is a phenomenon of personal, professional, and scientific interest. How this process comes about in career development is a matter of considerable scientific interest.

Polanyi has a theory which deals analytically with the relation of pre-conscious to conscious experience. Kubie (1965) goes one step farther and deals analytically with unconscious as well as pre-conscious, and conscious experience. In addition, Kubie specifically highlights the importance of pre-conscious experience to the creative process. He also notes the possible perpetual interplay of unconscious, pre-conscious, and conscious experience provided that the interplay is not neurotically distorted.

For Kubie, conscious process requires the incorporation of form, pattern, and style into the previously unbound interplay of pre-conscious and unconscious experience. These aspects of creative organization, in turn, make possible explicit representation of what had previously been unconscious and hence only personal. Pre-conscious experiences continue in interplay with conscious patterns during the action contingent upon the explicit representation of the formerly tacit. This interplay frequently makes possible the emergence of higher order structures which prove capable of explaining previously diverse sets of specific experiences. Bruner (1963) has also noted this integrating process. He remarks that general and hence higher-order understanding inherently contains explanation of the lower-order phenomena subsumed by a generalization but that the generalization is not itself manifest in the specifics explained by it. Bruner speaks of such understanding as that of structure. Structure gives definiteness or "set" to those events capable of explanation by it. Unfortunately, Bruner, or at least many of his followers in the construction of school curricula, has, or have, not considered carefully the problem of whether structure is merely personal, or also impersonal and publicly transferable. Kubie, on the other hand, is explicit on this score. For Kubie, structure is largely creative and therefore essentially personal. This is the basis on which we momentarily intend to proceed in our use of the conception in attempting to facilitate the understanding of personal determination in career development.

Our interest in the adequate exercise of thought in the personal determination of career now requires that we incorporate unconscious as well as pre-conscious and conscious mechanisms into our emerging theory. Fortunately, the paradigm of differentiation and integration which Tiedeman has framed permits such incorporation. In fact, the paradigm schematizes the operation of conscious process both in single and multiple discontinuities as has been noted above. When conscious process is understood, it becomes possible to understand unconscious process by examining distortion of information, the limitation of possibility, and difficulty in reasoning. The examination can be conducted in collaboration with a counselor. However, the power of such examination finds ultimate realization in its easy application without undue personal discomfort by the person himself. This is the goal of liberalization _through_ education.

Time and Sequence in the Second-Order Effect of Personally Determining a Career

Educators believe that value rests in arranging circumstances for persons to have experiences. Since we are identified with Guidance-in-education, we also believe that there is value in supervising persons while they are experiencing the circumstances we arrange. This belief makes it easy for us to identify with the field of vocational education even though some vocational educators have difficulty identifying supervised practice as the prime element of their own activity. At the moment, we refrain from further exploration of the virtues of vocational education because we present them in Chapter 16. We therefore next turn to the problem of how far ahead one can lead in arranging experiences for others.

There seems to be agreement among educators that arranged experiences have power (1) when a person is in possession of his tacit understanding, and (2) when those experiences are arranged so as to make his tacit understanding explicit in an efficient manner. Under such circumstances it is easy to identify task commitment and hence to speak of motivation. Furthermore, it is possible to probe the origins of tacit understanding and, on the basis of such information, to adopt different routes of presentation. Furthermore, the interplay of the pre-conscious (tacit) and conscious (explicit) process is likely to be reasonably free and higher-order restructuring of original tacit understanding is likely to take place readily.

Can we make that which is explicit to us personal to someone else? Should we? Is it practicable? Such questions arise when you attempt to lead tacit understanding by too great a distance. We believe it actually is both possible and necessary to lead tacit understandings. We state our belief recognizing the risk we thereby assume that the tacit understandings which we create might not be personal for the persons in whom they arise. In fact, we welcome this risk since it gives us reason to argue that it takes both a counselor and a teacher working in concert to facilitate an education that is freeing rather than enslaving (see Chapter 17). The teacher enters the educational process with expectation that the student will complete it without getting caught in the teacher's set with regard to the presentation of ideas. The counselor keeps examining the process of education with the student to insure that personal responsibility for knowing is being assumed. With this belief and goal, we consider it inappropriate for the counselor to invoke, or to be held to the appearance of, any explicit belief save that of understanding personal responsibility for knowing and acting. The latter responsibility we don't believe a counselor can escape and still maintain that he is effective in his work.

Because we believe that it is possible to lead tacit and explicit realizations with regard to personal determination in career development, we obligate ourselves to an interest in time and sequence in the process of developing the personally-determined career. Furthermore, we obligate ourselves to the provision of a theory which is not entirely internal in its determination. We shall now comment upon this latter obligation in relation to the former.

We first give consideration to the question of time* in the derivation of personal determination in career development. Time figures in the derivation as follows:

1. "Real" Time. Let us begin this discussion of time by recognizing that there is a passage (or sequence) of time which can be known between two parties with reasonable agreement particularly when our modern methods of "keeping" time are employed.

2. The Imagined Time of an Independent Person. There are two aspects of the imagination of time by an independent party which are salient to the evolution of the personally-determined career. The aspects are prediction and information.

A. Prediction. Prediction requires the imagination of future time by a second party who we shall here consider to be a scientist. In predicting, the scientist stipulates beforehand what he considers it likely will happen at a future time which he is also required to stipulate. Behavioral sciences in general seek to predict in this way.

B. Information. Predictions shared with the party they presume to determine can be turned into information by that party whose future is thereby presumably somewhat charted. If such sharing is accepted without question, it is likely that the outcome will be as predicted. However, if in sharing the information, the individual for whom the prediction is made attempts to turn the data into information for himself, he can act towards the information so as to prevent the prediction from happening or so as to enhance the likelihood that predicted events will occur. In either case, the likelihood that the individual can do anything about the prediction is greater when the person transmitting the prediction himself understands the basis on which it is made. If the basis represents a complex theory of human action, the sharing represents a tutoring of the individual in psychology.

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*Tiedeman owes introduction of this interest into his thought to Anthony Santonicola. Tiedeman has encouraged Santonicola's investigation of the manner in which time figures in self concepts.

3. Time Imagined by the Person Engaged in Experiencing. When a time in the future is imagined, the interval thereby denoted can be filled out with the states and properties possibly attributable to conditions the person might like to realize for himself. This imagined condition of the future can give him opportunity to see how he might like what would likely occur if such consequences could become explicit for him. Sometimes in concentration, in conversation, in role playing, or in dramatization, it is possible to simulate unconscious and pre-conscious associations in relation to possibilities under consideration for times in the future. Obviously, the vividness of such imagined experience has important consequence for the emergence of tacit (pre-conscious) understandings about what one may, or wants to, become. The accuracy of what later becomes explicit from the tacit will depend on 1) neurotic processes, 2) the accuracy of information supplied from 2B, and 3) the presenter of information in 2B.

4. No Elapsed Time. There are two forms of this time condition, incorporation and intuition.

A. Incorporation. One form exists when discontinuity is incorporated into continuity. In this form there is a change of state. States/properties get transformed into potential for use. States/ properties become understood as processes. This condition is that of the step of integration in our paradigm of differentiation and integration. Although time may be needed prior to the change in state in order to prepare for the change in state, the change of state is itself instantaneous and not representable in terms of time. This means that _a change of state is without sequence_.

B. Intuition. The second form of this condition is actually akin to (A) above but we separate it from (A) in order to name it as "intuition." Intuition through the pre-conscious also occurs without lapse of time. However, intuition provides power through tacit understanding prior to capacity of explicit formulation. Intuition obviously contains potential for the economization of time and effort. This is why it is valuable as well as powerful. However, the emergence of intuitions is not always possible or predictable. Furthermore, not all intuitions have the power of later explicit congruence with what was to have been understood by the intuition. These are the two elements which make the counselor's interest in the cultivation of intuition a predicament to be borne, not a problem to be solved (see Chapter 18).

Obviously the educator, this time the counselor, attempts to arrange conditions so that the above economies of time through incorporation and intuition come to be a useful part of the lives of people. It is interesting to note that the prediction information becomes most powerful when in effect "time ceases to exist" and as a result the person comes to be most himself.

The conditions by which this seeming magic with time are wrought requires attention to another conception associated with that of time, namely sequence. We attempt distinction of two forms of sequence, that determined by another, and that determined personally.

1. Another's Determination of Sequence. Two forms of sequence may be determined by other than the subject, namely sequence as used in behavioral science, and sequence as used in analysis.

A. Sequence in Behavioral Science. Consider the following paradigm of Dubois:

> In all of the 11 experiments reported, it was tacitly assumed that the sequential nature of the inductive-deductive process, as diagrammed in Figures 1 to 5 of the Study, (authors' note: Study is not itself reproduced here) precludes an experiment in which identical materials are used in the two treatments. This is in fact true of an inductive-deductive comparison, as will be shown below, but it is not true if we shift the comparison to one between verbalized awareness and deduction.
>
> It will be recalled (Study, p. 20) that the earlier formulation of induction and deduction mentioned that a given example used in induction could equally well be repeated in deduction after a given relation has been taught. For example, suppose a program of instruction, labeled "x", consisting of ordered pairs of frames and

> responses. With reference to Figure 5 (Study, p. 30), this program permits the student to begin at A and make the induction at B_1. Now suppose a second program of instruction, labeled "Y," stating in words the same concepts taught inductively by X. This program constitutes the material taught by subordination at B_2 (Study, pp. 28-30). The ordered pair (X,Y) is then a teaching procedure resulting in verbalized awareness. But the ordered pair (Y,X) is also identifiable, since the set X of ordered pairs of frames and responses can equally well serve to give the student practice on the concepts just stated by Y. (Y,X) is simply a program of teaching by deduction.
>
> The same teaching materials, X and Y, have thus been combined in their two possible orders to give two different teaching procedures, one by verbalized awareness and the other by deduction. It is apparent that identical materials could not be used if the comparison were between induction, as defined in Section 2, pp. 3-30 of the Study, and deduction, since program Y could have no part in a purely inductive program ... (Dubois, 1965).

The above paradigm represents an extremely clever distinction among induction, verbalized awareness, and deduction. However, the paradigm is completely determined from the standpoint of the investigator as it was intended to be. This arrangement is necessary in behavioral science in order to keep the subject from entering into consideration of the theory being framed. Therefore, everything must be done to the subject and he only responds to what is done to him. Behavioral science presently does not ordinarily honor the possibility of thought in any form except that of the investigator. The Dubois schema represents this by-passing of the subject's thought through the introduction of sequence into the order of events presented to the subject. The imposition of sequenced representation of explicit operations on the theory of thought in action excludes the possibility that the subject can experience induction. Thus the behavioral sciences effectively exclude the conception of intuition which is what must be cultivated if personal determination is to ensue in career and personality development.

B. Sequence in Analysis. In analysis, unlike the behavioral sciences, information is actually incorporated into the subject's consciousness. Such incorporation frequently takes place best when bases for facts are presented along with facts. In incorporation, sequence, if present, is likely to be indefinite. In fact, understanding during incorporation largely stems from the breaking of sequences.

2. Determination of Sequence for Oneself. We again distinguish two forms of sequence in the personal category of sequence, namely understanding and planning.

A. Understanding. Sequence in understanding, as in analysis, is largely indefinite. However, deliberate re-arrangement of sequence frequently leads through pre-conscious experiencing, to new levels of understanding of formerly patterned (sequenced) material (see Chapters 10 and 12). The understanding of the sequence of re-ordering occasionally provides information of power to the process of understanding.

B. Planning. Planning involves the insertion into the future of a sequence of expectations. The expectations bear upon particular events or situations and the sequence in which they are likely to be experienced. Planning represents a means of "binding-up" time in the future. It creates an intention and expectation concerning future events. Plans therefore represent powerful "searchlights" into the futures of people. This is one reason why counselors like plans. Plans "bind-up" the futures of people. Presumably counselors strive for binding which is of social significance and acceptability.

Conclusion

Our explorations in this Chapter brought us to define personality and career development as second-order effects emerging during coordinated differentiation and integration inherent in the multitude of discontinuities of education, work and life. We then went on to specify the unconscious, pre-conscious, and conscious processes which take place in the creative act which is required to subordinate prior and anticipated future events to higher order conceptions and operations. These higher order conceptions and operations are inherent in our ascription of the term "second-order effect" to personal determination in career and personality developments.

The concept of creativity in turn raises issues of time and sequence which must be analyzed from the standpoint of participant and observer. The second-order effects which we single out in the ordination processes of career and personality developments are those of the participant. We therefore end up by noting that we must essentially "leap over" the time and sequence conditions which are available to the observer. However, in humanistically moving to insure the presence of personal creativity within our inquiries we are still scientifically moved to be as explicit as we can about this personal process. This is why in the next chapter we specify some of the mechanisms whereby we may arrange both the conditions and expectation for personal creativity and observe, mark, and record conditions in which, and under which, creativity happens. We hope thereby to keep the object of our concern but to remain as scientific as that object of concern permits us to be.

CHAPTER 12

THE ORGANIZATION AND INTENTION OF A PROPOSED DATA AND EDUCATIONAL SYSTEM FOR VOCATIONAL DECISION-MAKING*

Overview

Personal determination in career development originates from purposeful action provided that such action becomes related to the career realm of the person's experience. The cultivation of a union of purposeful action with career requires careful consideration of the issues of time and sequence by student and counselor. When the student and counselor focus upon the previously explicated "mechanisms" of time and sequence (Chapter 11) in relation to the processes involved in vocational choosing, unconscious, pre-conscious, and conscious mechanisms provide means of analyzing the objects and bases of choice in the development of the personally-determined career. The expansion of career development through the incorporation into personal and career continuities of the discontinuities of new career opportunities gives rise to the processes of differentiation and integration associated with such incorporation. The attainment of integration during the incorporation of discontinuity into continuity requires commitment to such incorporation as well as the assumption of tentativeness towards that incorporation so that the person is master, not slave, of the possibility.

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*This Chapter is based on parts of two papers by David V. Tiedeman. A part of the Chapter is from "An Information System for Vocational Decisions (ISVD): Cultivating the Possibility for Career through Operations" (ISVD Project Report No. 2); another part from a paper of the title of the Chapter itself (Harvard Studies in Career Development No. 42 and later ISVD Project Report No. 1).

Obviously the development of maturity which incorporates the personally-determined career is a matter of considerable duration in the life of man. In fact, it is our view that maturity is an always evolving condition, never an attained condition. Nevertheless, we believe that patterns are discernible at different ages and in relation to different problems in the evolution of career. This belief leads us to continue to search out such patterning now that our principles for its analysis are more explicit.

As of 1 June 1965, Allan Ellis and Tiedeman therefore forwarded to the U.S. Commissioner of Education a proposal for the development of an information system for vocational decisions. The system is to be developed during a three-year interval by Ellis and Tiedeman as two of eight principal investigators. The application is made by the President and Fellows of Harvard College through the Graduate School of Education. However, the New England Education Data Systems, of which the Newton School Department and the Harvard Graduate School of Education are members, is the agency through which work will primarily progress for that organization presently has the needed electronic computing equipment which will become the heart of the information system under construction.

The primary purpose of the information system will be to put students directly into contact with the computing equipment.

Obviously a good deal of vocational data will have to be available in the memory of the computing equipment in order to provide illumination for the requests of students. We will not be satisfied with information that is merely current and accurate, the principle criteria at present. The proposed project hopes to break the present restraints inherent in educational and occupational information by co-opting resources at Harvard and elsewhere which can also provide speculation about possible products of the future.

Products and services possible for the future will need translation into work organizations and into educational schemes required for the preparation and re-training of persons for performance of the needed functions. The project plans to take advantage of the skills of this nature which are available at the Center for the Study of Education and Development at the Harvard Graduate School of Education. CSED had developed techniques for the planning of educational development in conjunction with economic development in underdeveloped lands and hopes to experiment with these techniques for the New England region.

A curriculum will be constructed which will teach students how to use the educational and vocational information which the machines are to provide for them in the framing of vocational decisions. The development of a "sense of agency," the assumption of responsibility during choice in vocational decisions is to be the primary goal of this instruction.

Finally, as technique becomes crystallized for the various ages reached by the curriculum, it will become necessary to develop a measurement system for assessment of the emergence of personal determination in the development of career. It is likely that the measurement system will need to include tests of: a) vocational self-concept; b) sense of agency; c) work values;

d) occupational constructs; e) vocational planning readiness; f) occupational interest; g) skills potential; and h) aptitudes.

The successful completion of the proposed project can have profound effect on the responsibilities of the counselor. The information system for vocational decisions intends to put students in direct relation with machine sources of educational and vocational data. The task of the counselor will then be to insure that students relate themselves to the facts provided by the system as if it is merely data, not the determined future of the student. The procedure of making decisions will then become the explicit context within which the counselor's discourse in this task will find focus. Finally, the process of making informed decisions will become the professional context within which the counselor must operate. In other words, case by case, year after year, the counselor must focus upon the developed awareness of the student concerning his process of decision making in educational and vocational realms.

Judgment about the present state of the student's decision making with regard to his responsibility for career will require careful attention to unconscious, pre-conscious, and conscious experience in students. Particular attention will have to be given to pre-conscious experience. In fact, the procedures of counseling will be focused upon the cultivation of pre-conscious experience in career development. Such a focus will bring an attention to creativity in schools which Kubie (1958) considers to be sorely needed. It is a moot point as to whether the application of this attention through the procedure of decision making in the career realm alone will have the desired profound effect throughout the personality. We contend, however, that such direct attention will be of considerable help in this direction.

An Information System for Vocational Decisions (ISVD): Cultivating the Possibility for Career Through Operations

Thesis. We believe that vocational education is necessary in liberal education in order to cultivate completion of vocational development more avidly than now occurs. This is the thesis we develop further in this Chapter. We trust that we can appropriately convey our actual belief that clear understanding of the necessity and import of the vocational role in life constitutes a freeing, not a constraining experience. We say this because, in the course of this statement, it may surprise the reader to learn that we will attempt to use a computer-based Information System for Vocational Decisions to further vocational development. Despite public opinion that computers make decisions and thereby determine lives, we intend to assemble a System in which users can, and must, themselves make decisions and thereby experience both much widened opportunity and the expectation that they will become more capable and responsible for determining their own vocational destinies.

Vocational education presently largely limits itself merely to the provision of skill in relation to a specific occupation. Commitment, albeit temporary we hope, is absolutely necessary for skillful practice of an occupation. However, in order for career development to proceed, it is necessary both that the commitment to occupation first exist and that the decision about specific occupation later diffuse into a condition of tentativeness. Vocational education does not at the present time sufficiently modulate its emphasis on commitment by a simultaneous emphasis on tentativeness. This is a condition which the Information System for Vocational Decisions expects to alleviate in important ways. The aim of the System is to foster capacity for, and confidence in, career, not just occupation.

Vocational development occurs throughout several years of life. Furthermore, vocational development has several identifiable modes and processes of expression. These modes and processes of expression largely develop in relation to the tasks and choices of an educational and vocational nature which we make it possible for youth and young adults to experience.

Some investigators choose to study vocational development as something which *exists*, thereby deliberately avoiding considering how it *might be* (cf. Crites, 1964). The Information System for Vocational Decisions which Tiedeman and his colleagues are assembling in prototypic form will, on the contrary, focus on vocational development as it might well be. In doing so, we will attempt to take advantage of studies concerning what vocational development now is; the specific dimensions of vocational development which we will be attempting to augment are:

1. the placing of occupation into vocational development as but a single instance of vocational expression;
2. the offering of responsibility to students and workers for choice in education, work, leisure, and marriage;
3. the extension of opportunity for occupational choice and preparation down into the elementary grades and out into work until retirement; and
4. the provision of an explicit educational context within which students and workers can be made aware of the value of fantasy, imagination, and preconscious experience for maintaining both continuity in personality organization and career sufficient to permit the experiencing and incorporation into personality and

career of discontinuity in educational and occupational opportunities.

The faith of the System will be that intuition disciplined by reason offers the chief "guiding" mechanism for us in our democracy.

The System

A. General Framework

The Information System for Vocational Decisions is deliberately named despite the fact that our connotations for its words are not presently entirely a matter of common parlance. The word "Information" is intended to connote the placing of facts/data into the context of use. This use of the word emphasizes our belief that facts/data require the context of use if they are to be conceived as information.

Students and workers are to be permitted to turn educational and occupational facts/data into information through the System. Thus the user becomes an explicit part of our connotation of "System." Our connotation reflects our intention to offer the user complete responsibility in choice of educational and vocational goals. Although it is probably inevitable that the computer will be blamed for "error," we do not intend to let the users of our System enjoy the luxury of that impression without contest.

The possibility for user determination of data processing in the System will be provided by a time-shared (or time-sliced as some prefer) computer potential. User-computer interaction becomes possible in the time-shared mode of modern large-scale computers. In that time-shared mode, the user 1) can make direct input into the computer under guidance from its predetermined routines, 2) can direct the processing of this input and other stored facts/data, and 3) can determine somewhat the form and content of the output. The speed of modern computers makes all this possible as if there were no delay in the computer's access to the user. Actually there is delay but the trick in establishing the operating computer programs governing the System will be to minimize that delay for the several users who will be in interaction with the computer seemingly as if their interactions were simultaneous. To the extent that delay becomes a factor in our System, the System will not service the needs of the user when he is exploring. For exploration, the mood being simulated in the interaction must be that of browsing. For instance, we all know that the telephone line has to be without "busy" signal when we are calling a person while in a condition of doubt about necessity for our calling.

Our context for generation of information through user-computer interactions will be that of vocational decision. Vocational decisions require parcelling of time and effort by the user to the several areas of his living in which attention and activity are expected. Our System will foster thought in relation to time and effort allocation to four areas of living: education, occupation, military service, and family. These categories represent several important elements of society in which interdependent activity is expected. Our System will deliberately emphasize the necessity for interdependence, but through encouragement of the expression of independence. We hope thereby to help persons mature through the exercise of choice and the mastery of choice processes, but to find self expression within responsibility for societal condition.

B. Ethic

Computer-based displays of occupational facts/data must be considered foundational to, not determining of, career. Otherwise, responsibility for life will be left with the System, not assumed by the user. This risk challenges the Information System for Vocational Decisions. As indicated in following subsections and in Appendix B, Part I, every effort will be devoted to providing safeguards in the computer-based programs against interpretations of predictions as unmodifiable determinants of career. Nevertheless, the officers who will mediate use of the System, namely counselors and placement officers, will need special instruction with regard to their responsibility for seeing that persons given access to the System eventually emerge from their System interactions understanding that they alone bear ultimate responsibility for their vocational endeavors. When users place themselves into relation with facts/data so that responsible actions of a vocational nature begin to develop in some measure, then will facts/data have been turned into information. This is the meaning of information which the System (computer routines and administrative officers) will be organized to promulgate, namely the transition of facts/data* into information through development of the capacity to analyze and act upon intentions of vocational significance. Morley and Tiedeman call this capacity "vocational competence" (Morley and Tiedeman, 1965).

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*Occupational facts/data come in two conditions, fixed and modifiable. We therefore elect to adopt the cumbersome term, "facts/data," to indicate this fact throughout this Chapter and Chapter 14 as well. Occupational facts are directly recoverable without mediation except for storage and later recovery. On the other hand, occupational data must be additionally processed by the numeric and/or linguistic routines of a mediation system.

C. Heuristics of the System

Our desire to emphasize individual responsibility for decision during interaction with the System places an important restraint upon the specifications of the System. Computer programs are to be merely heuristic, not determining. Although this distinction between heuristic and determinant may well prove hard to maintain, every effort will be made to develop programs which are only persuasively demonstrative, not logically compelling. Actually, healthy skepticism on the part of the user will be sufficient to maintain the distinction. However, it will be up to the professional judgment of the officers (counselors and placement officers alike) of the System to gauge both intrigue and skepticism so that personal benefit is gained from use but full responsibility for consequences is left with the user.

Preliminary analysis of the rudiments of decision-based action suggests that the routines of the System available for the context of relevance at particular times in vocational development must include:

1. heuristics leading, in potential, to an understanding of the processes of adjustment (Tiedeman and O'Hara, 1963, pp. 43-45); and
2. heuristics leading, in potential, to understanding of the processes of anticipation (Tiedeman and O'Hara, 1963, pp. 38-43).

In addition, the heuristics of anticipation must be focused so as to cultivate understanding of the sub-aspects of:

a. exploration;
b. the future, as seen through the speculations of another;
c. linkages of exploration and supposed possibilities of the future;
d. crystallization;

e. readiness for planning; and

f. readiness for clarification.

The preliminary specification of computer routines for the System (see Appendix B, Part II) brings the major problem of decision into ground for us. Please reflect upon the above sequence and note that there are essentially only three basic modes which must be represented in heuristic form.

The first of the heuristic modes needed is that of adjustment. In this mode the orientation will be to the past. The restraints will come from decisions already taken. Understanding must come from relation of experience to anticipations of what was expected.

Within the heuristics of anticipations there are two needed modalities. One of the two necessary modalities is that of exploration. In exploration, alternatives will not be available. Hence the machine routines must permit access at random when exploration is the dominant modality.

The second modality within the heuristic of anticipation will have to be that of examination. In many ways, examination will be like adjustment except that personal experience of direct relevance will not be available. In examination, fact, relationships, and complexity as understood by another can serve as a basis for construction of the routines because the alternative can be specified as the user enters this aspect of the System.

There are many gaps in our understanding of the operation of the System which Tiedeman and his colleagues* will have to bridge as the construction of the prototype progresses. However, at the present time the System problems are essentially those:

1) of providing material appropriate for various levels of consideration;
2) of programming so that material can appear upon command according to the heuristics then considered desirable by the user; and
3) of programming so that the user can benefit from the construction and frequent analysis of the history of his vocational life.

This latter possibility will require the greatest ingenuity and represents the greatest professional challenge.

D. Goal of the System

We trust it is clear that the System will attempt to encourage an appreciation of the humanistic ethic. The major goal of the System will be to create a developed and potentially available awareness of vocational possibilities in life, vocational competence, in short. Movement toward this goal will be facilitated as appropriate by:

1. attempting to augment the person's awareness of his alterna-

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*Principal investigators in the ISVD are Russell G. Davis, Richard Durstine, Allan B. Ellis, Wallace J. Fletcher, Edward Landy, Robert P. O'Hara, David V. Tiedeman, and Michael J. Wilson. Research associates include Duncan Circle, David Clemens, Arthur Kroll, Lawrence Lerer, and Eugene Wilson.

tives at all points of decision;

2. encouraging the person to exercise considered judgment whenever he elects to choose;
3. tutoring the person in the heuristics of choice whenever he enters the System for reason of choice;
4. supervising the person in his practice of some choosing, particularly that associated with his presence in the System but extending beyond limits of the machine aspects of the System to the extent that the necessary financial support is available; and
5. requiring assumption of personal responsibility for the outcomes associated with pursuit of elected alternatives.

E. Principle Paradigms of the System

The heuristics of the System which have been noted above are applicable in relation to any discontinuity which may be conceived in an anticipatory mode and in which activity is expected to be under direction of thought. These heuristics further presume three paradigms which we discuss here since they will need to give definition both to the manner in which the facts/data are accessible from the computer-based System and to the education of the user as he learns about personal responsibility from analyses of anticipation and adjustment in relation to sequence in discontinuity. The paradigms are:

1. choice;
2. thought in activity; and
3. investment of self in time.

The paradigm of choice will in turn be represented in the heuristics of the System through sub-aspects of:

a. context;

b. proportions of time devoted to contexts;

c. processes in choice; and

d. sequence in choice.

The contexts of choice available in the System will be: 1) educational; 2) Armed Force; 3) occupation; and 4) personal and family living.

The paradigm of choice in the proportional-time allocation to context will stress that:

1) responsibility for choice in time allocations can be exercised at numerous times in life; and
2) a person can assume responsibility for some adjustment of time allocations even at the present time (allowing, of course, for variation in available opportunity because of age and sex).

For instance, the System might note for a person that, since he is now age 16, his pattern of time election could well look like this:

Context	Proportion of Time
Armed Force	0
Education	1/2
Work	1/8
Personal and Family Living	3/8

The person might then indicate a choice and find out what the consequent time allocation proved to be. Exploration through numerous alternatives could provide the heuristics for appearance of pattern.

The paradigmatic representation of processes involved in choice must include:

1) investment of time (as above);

2) desired returns;

3) obligations required for receipt of desired returns; and

4) acceptance of delay between investment and return.

Mastery of the processes in choice provides the user with developed capacity for adjusting the proportion of time investment in sequences which can in turn lead to the experience of personal control within life style. The exercise of such control leads to the assumption of responsibility for action in which the person becomes increasingly independent, although also remaining necessarily interdependent. The System will attempt cultivation of this capacity by noting at least three possibilities for personal independence in each of the four contexts in choice. For instance, in the education context, the progress toward independent action (or in other words progression up occupation levels) offered through the heuristics of the System could be to encourage understanding of self in relation to acceptance of:

1) requirements in educational programs (doing what "they" want);

2) choice in electives and individual study (doing what "they" permit me to do independently); and

3) responsibility for consequences when originating ideas (being creative but permitting "them" to criticize my creativity).

Progress possibilities in self understanding for the other three contexts could be:

1) Armed force: a) enlistment; b) some direction of others; and c) command of others

2) Work: both a) change to another company, b) change within same company; c) change in activity of present job; and a) occupation, b) job, and c) position

3) Other: a) response to required pattern; b) some action upon pattern; and c) assumption of responsibility for setting pattern.

Progress from one independence level to the next in each of the contexts would enhance understanding of self in relation to the assumption of responsibilities during the incorporation of roles, particularly those roles permitting increased personal independence and responsibility. The principle mode of change in levels would still be in terms of proportional time allocations within the four contexts of choice. However, level would introduce an aspect of sequence into the processes of choice.

Before embarking on discussion of the sub-aspects of the paradigm of choice which the heuristics of the System should represent, we noted that thought in activity and investment of self in time were two other primary paradigms which the heuristics of the System had to portray and use. Actually, discussion of the more general conception of "choice" presumes both thought in activity and investment of self in time. However, both are worthy of further direct consideration because each is a central mechanism in the emergence of personal responsibility for career.

The paradigm of thought in activity must be represented throughout the System at three levels. The most general level of representation of thought in activity will be merely to encourage linkage of activity in thought. Think/do associations will be stressed. A secondary manifestation of this paradigm in the System will be to stress education/work associations. This level therefore becomes specific to career development. However, stress of specific levels of thought in activity in the Information System itself can only be conveyed through linking particular educational and vocational facts. The linkages of particular educational and vocational facts therefore constitute a tertiary but ultimate level of the paradigm which will be in the System.

In order to invest self in time, the person must construe the use of time for personal purposes. This stress unavoidably implies that time is of value and is to be valued. Dudley and Fletcher (Chapter 8) provide defense of this stress in terms:

1) of the value of entrepreneurial behavior; and
2) of the serious consequences now evident because of a general absence of personal determination in career development through entrepreneurial behavior.

We have previously attempted further explication of the concept of time in relation to their general concept of entrepreneurial behavior (Chapter 11).

F. Data Files

The System will have a data file for each of four areas of living: occupation, education, military service, and family. Data in each base is to range from general to specific. In addition, data will attempt both schematically to represent the present and to outline the future for a decade or so, such outlining to be in small time increments. These specifications obligate the System both to deal with local job markets and to incorporate data on local job vacancies which will be helpful in placement suggestions. The specifications further obligate the System to deal with education in generality sufficient for liberal education and in specificity sufficient for both local use and immediate progress to the next level in a sequence of subjects or to activity of laboratory, practice, or actual kinds.

The fifth data file in the System will contain student characteristics. This file will be in two parts. One part will deal with characteristics of students in general and will report on relationships of these characteristics with later choices and successes of those students. This file will be used both to suggest alternatives to users who need wider scope for consideration and to subject aspiration to the test of "reality" when the user is in a condition of clarification of a preferred alternative. The other part of the student characteristic data file will be the private educational and occupational history of the user as portrayed in his context of developing justification for his preferences and their pursuit and consequences.

G. Computer Routines*

Computer routines and supporting materials will be fashioned to conform with expectation that this vocational decision paradigm both exists and can become explicit and useful to someone who practices its use. The paradigm will determine the computer routines which we will develop to permit access to each of the data bases and to provide data upon request. There will be three primary computer routines: REVIEW, EXPLORATION, and CLARIFICATION.

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*The basis for this planned use is due to Allan B. Ellis.

The REVIEW computer routine will permit call up and comparison of a prior statement about a then future event after both that expected future event has occurred and the user has provided indication of how his prior expectations were fulfilled before he sees his prior statement of those expectations. The procedure will expect a person to experience insight with regard to consistency, and inconsistency available during comparison, and to learn from such insight that his own intuition guides his activity. The intended outcome of REVIEW is that the user learn from his history.

The EXPLORATION computer routine will allow the person to rove through a data base as near randomly as possible. The routine will encourage use of randomness largely at general levels to conserve time but will not forbid specific exploration when desired. Furthermore, routines will be developed to suggest alternatives on the basis of comparison of personal characteristics with established associations between such characteristics of others and their preferred alternatives. The intended outcome from this routine is 1) emergence of a set of alternatives, and 2) the bases on which the alternatives are preferred. We emphasize this latter point to increase awareness of the reasoning process that is actually involved in career development.

The CLARIFICATION computer routine will be available after specific alternatives are selected. CLARIFICATION will take the user into queries about the depth of his knowledge concerning the then favored alternatives and the understanding of future alternatives which are likely linked with present preferences. The outcome desired from CLARIFICATION will be the dispelling both of some doubt and of some ignorance concerning the next step in the progress of career which the person is evolving. Lessening of both doubt and ignorance is likely to increase the user's confidence in meeting the required activities of his next step.

In addition to the three primary computer routines, MONITOR will be available as the only secondary computer routine. MONITOR will essentially consist of the evaluations which we are able to concoct to determine existence of mastery of stages in the paradigm of vocational decision-making. For this reason, MONITOR must be able to play back into as well as over the computer inputs which the person generates. There will be three essential aspects of MONITOR.

The first aspect will be the actual procedure which we concoct and program the computer to provide. The second aspect will be the bases on which we have caused our judgments to operate among the data put in by the person during his interaction with the computer. The third aspect will be the basic computer routines themselves which the person will be taught to use if and when he desires to have them. This aspect will make it possible for the user to write his own monitoring bases to some extent and to have these monitoring procedures play among his material just as ours did originally. We hope through MONITOR to encourage mastery of the concept of feedback and to give practice and supervision in its application.

H. Materials

The computer routines will incorporate the vocational decision-making paradigm. We do not expect that the computer will itself be sufficient to mature fully the capacity and confidence for use of the decision-making paradigm. We will therefore design two other activities into the System. One of these activities will be the simulation of decision-making. Simulation will be available in 1)games, 2) booklets in which the concepts are taught, and 3) decision problems of a vocational nature which must be solved in interaction with the computer.

The second of our activities which we hope will further mature the use of the paradigm of vocational decision-making will be the actual provision of responsibility for work under laboratory and practice conditions. In laboratory and practice, reality can replace imagination if there is intentful supervision of our users as they practice. This supervision will probably be of the same nature as that employed by counselors with our users as they are engaged in the simulated activities of vocational decision-making during user-computer interactions.

Our materials must be compatible with computer use and must contribute to education for vocational decision-making. We will attempt to make visual and typewritten inputs available to our users under direction from the computer. Oral input must be with either the direct aid of the counselor or after his later review of a tape recorder. On line, oral input is not yet available in modern computers.

We will attempt to make pictorial and word outputs available to our users as well as auditory outputs. The coordination of our input and output modes with the several modes of the decision-making paradigm will test our imaginations to the limits.

I. Development through the System

The paradigms of the prior section will find expression and use in the System through the heuristic modes which provide computer-based access to facts/data in a manner designed to facilitate their transformation into information. Of course, the transformation is a cognitive and experiential process which is occurring throughout life. A System with the flexibility of presenting facts/data of occupations through the outlined paradigms and heuristics can be of great value over a considerable age range. In fact, the range can probably be from kindergarten through retirement if the counselor becomes skilled in judging levels at which users can profitably enter into interaction with the System. These judgments will be akin to those the counselor makes in starting the individual intelligence testing of a person.

However, heuristics and paradigms are not alone sufficient for definition of the System. The development of cognitive capacities and of vocational choice must also be taken into account. Such an accounting is a difficult matter despite valuable leads from Super *et al*. (1963). Nevertheless, Warren Gribbons (1965) has provided preliminary specifications which will probably find expression in the Information System. The summary of Gribbons' specifications is as follows:

> *Kindergarten to Grade 3*. "The major concerns at this level will be to initiate effective problem-solving behavior, to acquaint the pupils with machines and their uses so they will be able to handle the rather sophisticated materials scheduled for the 4 to 6 grade level, and to initiate broadening of the youngsters' knowledge of the world of occupations.

Grades 4 to 6. "At this point in development, our interest is focused on the youngster's *basis* for choice rather than on the choice itself. Therefore, during this period of exploration, we wish to have the pupil trust his pre-conscious experiences and give full rein to his imagination as a basis for considering alternatives. We want him to develop only a *sense* of plan (which presumes a choice) and he may start with fantasy or defense but we would like him to realize [through counseling, if necessary even if by computer (see Cogswell and Estavan, 1965)] when he is considering fantasy, defense, or reality. The emphasis during this period should be on exploratory behavior, which should be flexible. However, our major goal during this period will be to help the youngster to know himself--his interests, values, abilities--and to use this knowledge in selecting alternatives. It should then be possible for him to make far better progress through the crystallization and other future stages.

Grades 7 to 9. "The emphasis during this period will be on realistic self-appraisal of abilities, interests, and values and the relation of these to present and future educational and occupational decisions. The student will be getting ready to anticipate and carry out his own plans--most important of these is his choice of curriculum. The youngster who is successful in self assessment at this level will begin to realize that he is capable of analysis, that he can test out his ideas and that he can develop a capacity to see the consequences of his actions--representing a sense of agency. It will be very important during this period that the youngster *not* consider his self-assessment a 'test' or a school-type assessment.

Grades 10 to 12. "Particular attention must be given to terminal students who will not have the extra flexibility granted those who will go on to higher education. It is hoped that these youngsters will have developed the ability to make and execute the plans that will qualify them for the vocations they must now specify, but very careful assessment must be continued so the counselors can identify any areas of weakness and bring them to the youngster's awareness. This, of course, is not meant to suggest that college-bound youngsters be neglected, but only that *all* young people be given the greatest opportunity to achieve their highest potential whether they have the advantage of higher education or not.

The First Job. "At the present time it seems feasible to expand on the outlined procedures for use by individuals at work, college, or home. The stress should first be placed on planning for stabilization, i.e. becoming qualified for a stable job or accepting the inevitability of instability, and later advancing to the stage of consolidation and advancement.

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Post Entry Job. "System should be available for *anyone* wishing to use it, ideally through touch-tone type approach to be used in the home. The unemployed person or person desiring a change could then insert his private information into the System and request a list of available opportunities at any time. Until this is possible, however, the System might be made available through the neighborhood elementary school. Continued counseling assistance should also be available for those desiring it."*

(Gribbons, 1965)

Career: The Maturation of Personal Responsibility through Vocational Development

We have so far attempted to show that the Information System for Vocational Decisions will expect choice and will cultivate the capacity for and confidence in choosing by giving users almost infinite possibility for the exercise of decision-making among data bases while simultaneously attempting to make the processes of decision-making both explicit and mastered. These are elements in vocational development which have previously neither been unified in this manner nor made available for practice in modes in which complexity is possible but time is not of the essence, at least not the time of persons other than the person engaged in the exercise. The existence of the System will therefore be a first-time physical representation of the "outside" which the person must first learn to bring "inside" and then to act toward knowing that it is there but knowing that he need not be "driven" by it if he is the master of it.

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*Additional specifications are reported in Appendix B, Part III.

In its totality the System will represent "reality" in its data bases, offer processes for working with facts/data through its primary computer routines, and provide practice for integration of a differentiated condition. The System will provide practice under supervision through 1) its secondary computer routines, 2) its simulation of decision-making, and 3) its personal supervision a) by a counselor of the person in interaction in the computer routine and b) by a vocational educator as the student user assumes real work responsibility in laboratory and practice work situations.

The person who through his life comes to master structure and process in this way and to come to a comfortable and integrated accomodation to both, has mastered the archetectonics of vocational development. He has both developed and been tutored in the capacity to consider his development and to engage in the thoughtful activity which puts the person into development. This is possible through vocational development in which the "myths" of "others" and "authorities" are available in machines but interactions with their pronouncements are encouraged in ways in which all are eventually disclosed as being only partial and never completely accurate. By offering the person opportunity to come in contact with the best of the known and to grow in realization that the best of the known is still not Truth, it becomes gradually possible for him to realize his own possibilities and responsibilities in representing his desires and aspirations. Through the practice of aspiring in the System, the user first has a "crutch" for the expression and testing of aspiration. It remains for the supervisors of the System to make sure that the "crutch" is later abandoned but that return for data/facts is not denied when they can usefully contribute to later decisions.

We speak of a mature condition in vocational development which is only approximated, never fully attained in all regards with all decisions. However, through patience and practice, persons should be able to achieve more mastery of the processes required for thought in action than is presently the case.

Processes of thought in action mature slowly. This is why the System expects to span a range from elementary school to retirement.

Processes of thought in action require practice and feedback as well as the exercise of imagination. This is why the System starts in imagination but spans reality through simulation of reality and through supervision of activity in real condition.

All capable educators recognize in their daily activities the need for reality as a test for imagination. This is an important reason why the Information System must embrace vocational education. Since vocational education is a form of education in which reality enters into education, we personally think it is a shame to attempt to make vocational education more general. Instead, we should attempt to make vocational education more specific to the goal of role incorporation. The vocationalization of preference and activity depends as much, if not more, on education for understanding of choosing and role acquisition than it does on training for occupational skills. Vocational educators would therefore do well first to insure that their colleagues in general education did not forget to train for relevant occupational skills through their "general" curriculum, and second to concentrate their own attention on the socialization processes which are involved in developing understanding in relation to the processes of choosing and role acquisition. Such priorities would 1) place a general goal into the specific interests of vocational educators, 2) make both general and vocational educators accountable for the specifics of vocational education, but 3) still leave vocational educators with an extremely important stake in education for career.

The System's Current Status and Prospects

The Information System for Vocational Decisions has formally existed only since 1 June 1966. Since that time we have 1) assembled necessary personnel, 2) worked out our location in a complex University, and in collaboration with the Newton, Massachusetts School Department, and the New England Education Data Systems, 3) delineated our need for computational equipment, and 4) started the construction of computer routines and materials.

The System is to have a working prototype available by 1 July 1969. During our thirty-seven month project, we intend to bring the System through two generations of a prototype. The intention is to have practically complete and reasonable accurate specifications of an operating computer system for vocational decisions at the conclusion of the project. We will also have a working second generation prototype, of course.

Two roadblocks loom ahead. One block consists of the limitations of existing computational equipment itself. These limitations are in the small size and capability of most of the existing equipment, in the slow emergence and delivery of adequate equipment, and in the actual cost of adequate equipment in relation to our original estimates. The second roadblock is in Congressional action toward research in vocational education. The reduction of funds available during Fiscal Year 1967 and any later reductions under terms of the Vocational Education Act of 1963, may well bring about serious barrier to the possible conclusion of the Information System for Vocational Decisions.

CHAPTER 13

ASPECTS OF IMAGINATION IN THE LEARNING PROCESS*

Overview

Like the preceding statement in which we present the nature and status of the Information System for Vocational Decisions, this Chapter represents a statement of proposal and description of work in progress. In this discussion we proceed with further conceptual analysis of the issues initially outlined in Chapter 10. Here, however, the specific emphasis is upon a range of exploratory strategies for investigating humor, dreams, and figurative speech as variant modes of imagination in the service of personal learning. While developing this discussion within the context of current psychoanalytic meta-psychology, we invoke also the resources of post-Wittgensteinian approaches to philosophical analysis specifically with regard to the epistemological problems raised by our proposal.

Our increasing regard for the multiple modes or dimensions of meaning implicit in the ordinary languages of human conduct and in the range of conceptual models which characterize current theoretical efforts in the behavioral sciences bears particular emphasis; it provides an important basis for integrating within a developing theoretical position the findings which we derive from such apparently diverse efforts as the ISVD Project and this individual study in imagination.

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*This Chapter is based on a doctoral proposal circulated by Gordon A. Dudley, under title of "Aspects of Imagination in the Learning Process: An Exploratory Study of Humor, Dreams and Figurative Speech in the Service of Personal Knowledge."

Another major implication of the discussion in this Chapter is that the specifics of investigative procedure outlined remain in the service of, as necessarily emerging from, a continuing analytical exploration of the subject and purposes of investigation. This paper, thus, raises a number of more general issues regarding the nature of psychological inquiry which become the focus of discussion in Chapters 14 and 15.

Purpose and Assumptions

Our topic in this Chapter is a study designed to explore aspects of imagination manifest in the service of personal learning. We shall outline a proposal for investigating symbolic processes of thought which emerge within the general context of a specific educational experience. In our discussion we shall consider configurations of humor, figures of speech, and "epigenetic" dimensions of dream reports as three psychological phenomena of functional salience within the context of individual thought and group interaction generated by a new Harvard Graduate School of Education Seminar in Guidance: C-231.*

The objective of the study is to develop rationale and procedures for charting within their phenomenological context educationally significant configurations of imagination manifest in the interplay of these three dimensions of symbolic thought.

The investigative strategy to be proposed focuses upon formal attributes of imagination as a means of documenting functional relationships among specific educational issues and themes reflected in the content of group interaction generated by such seminar discussions.

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* C-231 Guidance: Seminar and Practicum in Group Process and
Individual Learning
half course (spring term) Mon., Wed., 4-6

The function of groups as contexts for individual learning. Examination of data derived from (1) face-to-face participation and written work, (2) readings, and (3) recordings. Exploration of skills of leadership as they develop through increased perceptiveness coupled with explicit understanding of group process. Consideration of relevancies for a range of educational actions.

(H.G.S.E. Register, 1966-67)

Three explicit assumptions serve to inform this proposal. First, we assume that symbolic processes of thought give significant expression to resources of intellectual integrity, personal responsibility, and a capacity for active collaboration that are crucial to educational thought and practice. We assume, that is, that configurations of imaginative thought give both substance and direction not only to liberal education but to sound professional training in educational practice as well.

Second, the "informed vision" to which David Hawkins has referred as "the essential construction of the art that is science" is one which we assume to be significantly reflected in symbolic aspects of imagination. We assume that processes of thought reflected in humor, metaphor, and dreams entail configurations of perception from which emerge both scientific fact and scientific theory.

Third, we assume that the purposes of the study shall require an informed address to a number of complex methodological issues regarding the conduct of psychological inquiry in contexts of human multiplicity. We assume, that is, the importance of issues which are neither acknowledged nor precluded by the unexamined notion that both "subjects" and "investigator" share the common purpose of enhancing a mutual capacity to observe and interpret human events with professional understanding. The importance as well as the complexity of these issues are tacitly acknowledged in the choice of the word aspects as it appears in the title of the Chapter and as it is used throughout the description of the study.

For while role, dimensions, attributes, and a number of other scientifically impersonal terms were considered, our decision in favor of aspects is by virtue of the interplay which that word suggests between "the appearance of a thing as seen from a particular point of view" and "the form that a verb takes to indicate duration of completion of action." Thus a second-order or "meta" perspective regarding the purpose of the study includes the intent to explore resources for a more explicit articulation of significant tacit acknowledgments regarding an imaginative interaction or interplay among the personal acts of knowing that, knowing how, and why, and being able.

Background of the Proposal

This proposal outlines a study designed to investigate ideas outlined in Chapter 10. In that Chapter, Dudley offered a discussion of several conceptual issues regarding the nature of personality structure and the organization of thought processes. In the context of those issues, he then reviewed what appear, in his view, to be especially significant contributions provided, on the one hand, by psychoanalytic approaches to the "depth" of personality structure and, on the other, by a number of more academic efforts to map the "surface" or "linear" dimensions of human behavior. In that discussion a comparison of such distinct contributions served to emphasize a number of crucial discontinuities in the description of human action which result from a direct combination of the clinical and the academic approaches to personality organization. In brief, Dudley attempted in that statement to outline the crucial discontinuities between such psychologies of "depth" and of "surface" that are manifest in their address to questions of personal integrity in patterns of human development and in the process of individual learning.

In Chapter 10, Dudley's general objective was to raise for further consideration the significance of symbolic processes of imagination as psychological phenomena which manifest in their formal attributes configurations of personal integrity and stylistic principles of human action -- phenomena which, therefore, if more adequately understood, should enable us to clarify and perhaps resolve the conceptual discontinuities that now characterize our efforts toward a psychology of persons. The central notion suggested there and to be examined more directly here is that an analytical description of the form and functioning of these symbolic processes of imaginative synthesis can make a significant contribution to a psychology of personal knowledge -- one which shall articulate more fully what we now tacitly regard as the inevitable interplay of "functionally autonomous" and "disfunctionally subsidiary" aspects of human thought, learning, and action.

As reviewed in Chapter 10, the concept of psychological development, with its emphasis on the hierarchically structured organization of progressively differentiated behaviors, represents an approach to human action which serves to mediate, to integrate somewhat, the conceptual discontinuities existing between our current psychologies of "depth" and "surface". In this regard, Erikson's "epigenetic" principle of development (Erikson, 1959) and Piaget's notion of "vertical decalage" (Flavell, 1963) seem especially significant. In addition, Perry's scheme for charting patterns of development reflected in the structural attributes of personal stance from which college students address their educational experience emphasizes analogous principles of progressive differentiation and hierarchical organization (Perry, 1967). Within the general context of such "developmental" approaches to human action, the present proposal outlines a study intended to combine the advantages of Piaget's formal emphasis on the specifics of thought process with those of Erikson's epigenetic principle of psycho-social modes and modalities -- through a focus (analogous to that of Perry's) upon the functional configurations of thought and interaction generated by an immediate educational experience.

Within this context of related work, the present proposal is to be distinguished in a number of ways. Piaget's developmental psychology gives major emphasis to the interplay of "assimilation" and "accommodation." His concept of "vertical decalage" emphasizes spiraling, recapitulating aspects of development that entail a hierarchically structured and subtly integrated model. Yet his basic "schema" of intellectual functioning reflect his essentially epistemological concerns. That is, neither Piaget's conceptions of development nor his experimental procedures have been formulated with any particular regard for those dimensions of expressive behavior which represent organismic, covert, and, under some circumstances, "non-veridical" dimensions of behavior (cf. Bruner, 1959; Flavell, 1963;

Wolff, 1960; Spitz, 1965). And while recent developments in psychoanalytic ego psychology (in particular, Erikson's "epigenetic" model of psycho-social development) represent major insights regarding the interplay of the private and the public, and of the tacit and the articulate, their contributions are most clearly developed and most significant at the level of the total life cycle. These theories of development are perhaps least effective in specifying the central processes of learning from which such psycho-social patterns presumably emerge. Thus, Erikson's statements specifically regarding "synthetic" functions of the ego inevitably reflect his emphasis upon the life span dimensions of "epigenesis". The result is that, as Jones has commented, "We do not quite get the epi into the genesis, we can point to 'genetic sequences' and to 'progressions from the organized and undifferentiated to the organized and differentiated'. But we still do not know what 'synthetic tendencies' look like." (Jones, 1962-a) Some notion of such processes is crucial in any useful developmental concept of learning. Indeed, they must tacitly be presumed by any developmental psychology that is not simply a maturational scheme. Furthermore, such a lack of specificity with respect to processes of "ego synthesis" or personal integration does not seem inevitable.

We presume that "the same recapitulative principle seems to guide human adaptation whether we take the 'epigenetic' unit of the life cycle or the 'microgenetic' unit of split-second perception." (Jones, 1962b) We presume that "human beings when confronted by a novel and challenging situation begin to master themselves in relation to that situation by recapitulating a telescoped version of their own life history in respect to it..." (ibid). In other words, we wish to suggest that insights regarding the formal attributes of more general patterns of human development can lead us in the discovery and specification of configurations of thought central to the learning process.

But how might we proceed to make use of such notions? What, if any, specific investigative procedures are at hand which focus upon the formal attributes of personal integrity or "ego synthesis" as those attributes are reflected in and serve to shape central processes of learning -- as they are reflected in the act of personal knowledge? What procedures are available? What procedures must be developed? And what procedures can only reside in the total person of the investigator as he himself engages in an act of personal knowledge with respect to such professionally shared issues concerning the process of learning?

A number of assessment strategies recently developed emphasize functionally autonomous processes of ego integration or ego synthesis and their role in the service of character structure. Prelinger and Zimet (1964) have developed what they term an "ego-psychological approach to character assessment." Their strategy consists of a set of descriptive criteria designed to "provide a theoretically relevant, reasonably exhaustive, and conceptually consistent framework for the organization and representation of an individual's habitual mode of bringing into harmony the tasks presented by internal demand and the external world." Their model consists of eight major categories or dimensions of psychological functioning reflecting a gross hierarchy of structural components: (1) ideational style, (2) prominent affects, (3) prominent defenses, (4) superego, (5) adaptive strengths, (6) sense of self, (7) psycho-social modalities, and (8) character elaborations. One innovation of their approach is that the specific ratings for which the schema provides are based on interpretations of raw assessment data, rather than upon the data themselves -- a procedure adopted as crucial to the present proposal and recommended, in addition, by Schafer (1954)

> We need research designs that embrace rather than skirt the complexities of psychic functioning...one way to meet these complexities...is to use interpretations as our research units...

Anna Freud and colleagues have recently published a "profile" for the "metapsychological assessment of the adult personality" (Freud, A. et al., 1965). This profile, designed as a "framework for thinking" rather than a questionnaire scale or instrument, provides for the organization of clinical judgments relevant to the "age-adequate developments of internal structuralization and adaptation to the environment."

In the case of the schemes developed by Prelinger and Zimet and by Freud and her colleagues, there is a clear and generalized rationale for specification of psychological processes within a functional context of character structure; however, the particular strategies, or psychological processes are not specified. And within the context of the present proposal that specification is the crucial need.

Kroeber (1963) has come closer to a specification of these processes of character structure and psychological functioning. Kroeber's scheme focuses on the operations of the ego and extends the concept of defense mechanisms to include behaviors that are "particularly relevant to an active effective person dealing with demands, often conflicting, of a biological, psychological, or social nature." The essence of his proposal is that the mechanisms of the ego can be thought of as general means-structures which may take on either defensive or coping functions: "for any given individual, situation, or time the ego mechanisms may be utilized in either their coping or their defensive form or in combinations of both."

On the basis of this general rationale, Kroeber outlines specific criteria for distinguishing between the defensive and coping dimensions of behavior manifest by ten such ego structures.* As Kroeber points out, his ten ego structures or mechanisms fall into three rough groupings: the first three pertain essentially to cognitive functions, while the last three pertain essentially to the structure of impulse economics, with the middle four something of a mixture. They reflect, that is, a continuum of psychological functioning between what in psychoanalytic theory is conceived as secondary process, reality oriented dimensions of behavior, on the one hand, and primary-process, drive organized dimensions, on the other.

The sources and structure of these ego mechanisms are, as Kroeber acknowledges, the crucial issue. Their relationship to those dimensions of motivational organization conceptualized by classical psychoanalytic theory and to those dimensions of psycho-social "fitting-together" emphasized by Hartmann, Erikson, Allport, and White, is also recognized as a crucial theoretical concern.

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*See Appendix C, Part I.

Kroeber's strategy is consistent with the general orientation advocated by Allport (1961) and White (1963) in the sense that he attempts to provide a more specific description of those dimensions of adaptive behavior which reflect coping as well as defensive structures. At the same time, his approach appears to be potentially more fruitful than that of either Allport or White by virtue of the fact that he seeks to make more explicit the continuity of behavior, the continuum of structural attributes of behavior, which extends across instinctual and reality organized dimensions (see also Chapter 10, pp. 10.32-10.37). His descriptions appear to be least adequate, however, at that point in the continuum where the transformation of instinctual energies becomes the central issue. Thus, his last three descriptive categories appear rather sketchy primarily because they attempt to deal with issues which require some more analytical approach to the dynamics of system structure and organization. In the context of the present proposal, Kroeber's major contribution consists of his ability to offer a useful array of descriptive categories while neither obscuring nor denying the crucial explanatory task which remains. Our intent here is, however, to outline an appropriate strategy for undertaking that task.

To summarize: the focus of this proposal is upon the educational significance of symbolic aspects of imagination by virtue of their giving expression to an "epigenetic" or "recapitulative" principle of development implicit in the "microgenetic" dimensions of the learning process. The proposal outlines an exploratory investigation of individually stylized, complexly determined, and multipotential configurations of social perception in the service of personal learning. By focusing specifically upon configurations of imagination within the immediate context of their functional significance as formal dimensions of an interaction process, the proposed study represents an effort to circumvent the limitations of those investigations of small group behavior which, on the one hand, primarily emphasize interpersonal dimensions of psychological dynamics or which, on the other hand, primarily emphasize sociologically significant aspects of role expectation and performance (Bales, 1951; Mills, 1964). In addition, by its emphasis upon observation of the phenomena in question as they emerge within the interaction of a group experience, the present study represents an attempt to circumvent limitations of more traditional approaches to the investigation of processes of "ego synthesis" by means of the individual psychological assessment interview (Prelinger and Zimet, 1964; Deutsch and Murphy, 1955; Schafer, 1954).

A review of the conceptual background of each of the major variables of the study (humor, dreams, and figurative speech) shall be offered in the following section devoted to procedures.

Procedures

Introduction: Exploratory Research and the Multiplicity of Human Actions. The purpose of the study is to explore and develop procedures for charting configurations of imagination presumed to relect processes of thought that are complex, subtle, and hierarchically ordered. An investigative procedure designed primarily to correlate linear dimensions of overt behavior is, therefore, essentially beside the point. Instead, procedures which are themselves exploratory, phenomenological, and adaptable to significant dimensions of the processes in question -- and as those phenomena emerge within the context of inquiry itself -- such procedures appear crucial to the intent of the study. The research paradigm of choice would, thus, seem to require what Sargent (1961) refers to as the "zoom lens" model: a procedure that begins with a wide-angle perspective and which facilitates subsequent adjustments in focus as significant patterns of phenomena assume a functional salience within the process of the inquiry.*

To indicate briefly our major points of methodological orientation -- points of orientation concerning issues which in themselves might well provide the subject for a full study -- we shall outline the following guiding principles:

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*Such a model is to be distinguished from what Sargent (in a shift of metaphors) refers to, on the one hand as a "seining" strategy designed to pick up anything and everything of potential relevance -- with the task of selecting and sorting deferred to a subsequent time and procedure. On the other hand, the "zoom lens" model is to be distinguished also from what Sargent refers to as the "casting" strategy which presumed that one knows rather precisely not only what fish one is after but what bait to use as well.

1. Exploratory research in areas of complex mental activity should begin with naturalistic observation of the phenomena from perspectives and by means of procedures which preserve contextual dimensions.

2. Initial explorations of such phenomena should give primary emphasis to formal dimensions -- to patterns, configurations, styles -- particularly as those formal dimensions assume salience within the functional context of their natural occurrence.

3. The initial objective should be upon the development of conceptual schemes within which to relate the formal aspects of such "multivalent" configurations to independently selected dimensions of their functional context.

4. The primary datum must consist of an interpretative act of observation -- perception through a tacit frame of reference for which the conceptual scheme serves as a first approximation in a process of progressive articulation.

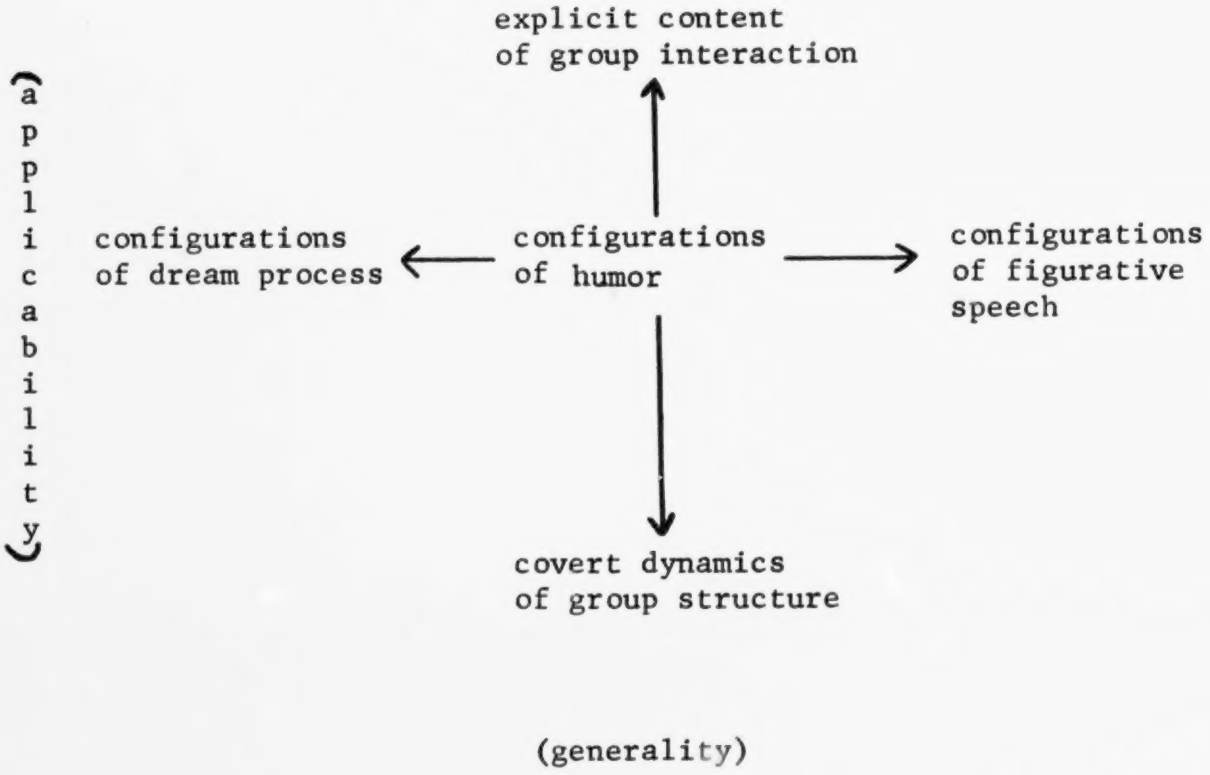
5. The relevant measure of significance, or "validity," for such a scheme and the observations which it serves to articulate consists of two primary dimensions:

a. generality: its capacity to document attributes of formal consistency among configurations of thought expressed in a number of distinct modes (i.e.: humor, dream, figurative speech).

b. applicability: its capacity to document functional relationships among attributes of human events generated by distinct analytical perspectives (i.e.: between the content of group interaction and the structure of covert themes and issues inferred on the basis of a specific theoretical model).

Figure 13.1

Dimensions of Significance


explicit content of group interaction
(applicability)
configurations of dream process
configurations of humor
configurations of figurative speech
covert dynamics of group structure
(generality)

The general perspective which we have attempted to implement in the planning of procedures for this study is aptly summarized in the following statement:

> Research workers...hastily restrict themselves to what is conscious, readily available, and easily verbalized. Admittedly, it is not so easy to objectify and quantify creativity, humor, variations in states of consciousness, and varieties of conscious experience. Extensive phenomenological investigations must come first. Reliability checks and quantitative comparisons should be carried out only in due time. While we may usually look down on the conception of scientific rigor in the writings of many psychiatrists and psychoanalysts, we must respect many for their patience, integrity, and courage in the face of bewildering complexity and ambiguity while they go on mapping out horizontal and vertical psychic territories.
>
> There is a risk of greater guilt in taking one's time, studying subjects intensively...looking into complex and elusive problems, and trespassing established boundaries of method and subject matter, but one then stands a better chance of assessing central factors and creating something memorable.
>
> (Schafer, 1958; pp. 144-145)

Situation. The immediate context of the proposed investigation is that provided by a Harvard Graduate School of Education Seminar in Guidance: C-231: "Group Process and Individual Learning." The instructor is Mr. Morimoto of the Bureau of Study Counsel. The seminar was offered for the first time during the spring term 1967.

As a new course within the formal program of study offered by the Harvard Graduate School of Education, the seminar is an outcome of a need expressed by advanced students, a responsibility acknowledged by the staff and administration, and an extension of educational resources that are an established part of the school's guidance program. In particular, the seminar represents a newly formalized educational venture that stems from a trial experience with a small "pilot" group which met with Mr. Morimoto during the course of the preceding year.

The emphasis of the seminar is upon the function of groups as contexts for individual learning. Thus, while a wide range of alternatives with respect to materials and procedures is made available, the interaction of the individual members and leader (the group process) provide a primary process for developing skills of observation, inference and personal knowledge.

The objective of this particular emphasis is to provide the context and focus for an educational experience which shall be distinct from that provided by a task-oriented work or training group, on the one hand, and from that of an experience or therapy group, on the other. Thus the seminar has an explicit and objective focus: "the nature of groups as contexts for individual learning." At the same time, the group's discussion of the issues which arise in consideration of such an explicit subject represent for each member an immediate experience of processes of individual learning in the context of group interaction. Many individual and shared aspects of that experience shall remain covert; others shall find articulation as the interaction of the group is made an explicit resource in the service of the objectives of the discussions. The intent of Mr. Morimoto is to provide a context within which the articulation of objective issues regarding the nature of groups as contexts for individual learning shall be most effectively facilitated by a progressively informed tacit experience: the implicit personal knowledge of one's individual processes and style of learning within the context of group interaction (cf. Polanyi, 1958).

Subjects. Participation in the seminar is limited to twenty members selected by Mr. Morimoto on the basis of a personal interview. A graduate course, C-109 (Introduction to Counseling), or its equivalent, is a prerequisite. While the skills of observation to be derived from the group experience are considered relevant to a wide range of professional responsibilities within the field of education, many of those granted membership are doctoral candidates in the field of counseling psychology.

Data Collection.

A. Group Interaction: The human events occurring during the regular meetings of the group throughout the term comprise the primary source of data for our study. While all proceedings are recorded on magnetic tape, the primary data of the study consist of selections from those proceedings which in our judgment provide the most significant expression of the phenomena comprising the focus of the investigation.*

B. Personal Documents: In addition to the data generated by the group interaction, personal documents from individual members provide a second-order source of information. These comprise a collection of informal statements written weekly by each member during the course of the term. They are generally statements expressive of individual concerns, insights, and styles of perception in response to the invitation: "What stands out for you in connection with your learning in the group this week?" A second order of personal documents consists of written dream reports. Within the purposes of the present study, the relevance of dreams is confined to specific symbolic configurations -- the dream process itself -- rather than to their significance as personality assessment data. Therefore, the invitation to contribute written dream reports shall include provision for preserving anonymity.*

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* In addition to Dudley's training and experience in individual counseling and group work, he was invited by the instructor to participate in the pilot group experience of last year and thus have substantial prior sensitivities to Mr. Morimoto's purposes, procedures, and the general context of interaction that Morimoto finds most productive.

C. Interviews: In addition to the selection interviews to be conducted by Mr. Morimoto, follow-up interviews are conducted with group members in order to obtain a record of their experiences and perceptions. The procedure here is essentially that validated by Perry (1967) in his studies of patterns of development in Harvard students: to leave the subject as free as possible to speak from his own way of perceiving himself and the particular experience in question.**

Data Analysis: General. In view of the fact that for the purposes of this study, the "micro-unit" of research is the interpretative observation of the investigator, the distinction between data analysis and data collection becomes somewhat arbitrary and unrewarding. For this reason our discussion here shall tend to expand the consideration of issues raised earlier, while our subsequent outline of the specifics of "analysis" shall, at the same time, entail further discussion of some rather general notions.

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*See Appendix C, Part II.

**Thus, in the face of the "subject's natural expectation that the inquirer know what he wants to know and that, therefore, the subject has a right to know too," the investigator shall directly acknowledge the relevance of the question while indicating his assurance that for the purposes at hand, it is a question that cannot be answered. Accepting his share of the social discomfort involved, the investigator shall push on with the suggestion: "Why don't you start with whatever stands out for you in connection with the group experience." Interview strategy beyond this shall consist primarily of following up leads left unaccountably dangling, asking for elaboration, clarification, exemplification...in brief, invoking whatever techniques seem most relevant to facilitating the subject's telling of his story as fully as he might reasonably be inclined to. Again, the guide here shall be one of uncommon common sense in the service of a personally styled portrayal of a specific educational experience (Perry, 1967).

To repeat, the focus of the study is to be upon configurations of symbolic multiplicity -- upon stylistic dimensions of small group interaction process, manifest dream process, figurative processes in personal documents, and personal styles expressed in interviews. Thus, our analytic emphasis is not upon molecular units of content -- though at a complimentary level of analysis content is deemed important. Nor is our emphasis upon structure alone, though covert themes of structural conflict and equilibrium are not to be ignored. Our primary intent is not to document linear consistencies in either the content or structure of interaction nor in imaginative processes at either the explicit or covert levels. The objective is, rather, on the basis of preliminary, exploratory observations, to outline formal aspects of imagination giving symbolic expression to a capacity of mind which transforms, and thus integrates in the service of personal knowledge, tacit dimensions of private meaning and public reality manifest on several discontinuous levels of psychological activity.

In another equally important sense, our intent is to invoke and document skills of interpretative observation perhaps generally -- though unfortunately -- regarded as more characteristic of, or more appropriate to, studies in the humanities -- in fields such as literary or art criticism (cf., Aiken, 1955; Burke, 1957; Cavell, 1965; Gombrich, 1965; Hyman, 1955; Welleck and Warren, 1956). The intent is to invoke such skills of interpretative observation in the service of equally subtle and complex issues within the immediate context of human events. (cf., Bronowski, 1965; Burke, 1959; Jordan, 1964; Neisser, 1963; Perry, 1954; Royce, 1965; Waelder, 1930).*

Viewed in the light of such a "humanistic" perspective, the issue of scientific validity regarding interpretations of complex human events assumes new aspects. For, while it is indeed difficult -- if not intrinsically inappropriate -- to assess the validity of human judgments in contexts of complexity by the application of some single external standard of relevant consistency, significant assessments can be made with regard to the "validity" of the relationship between the formal organization of such interpretations and the functional contexts within which they are made.

> There are two types of corroboration and accordingly two types of critical evidence. There is corroboration of man with man, and corroboration of fact with fact. Let us call the first 'multiplicative corroboration' and the second 'structural corroboration'. And let us call the products of multiplicative corroboration 'data', and the products of structural corroboration 'danda'. (Pepper, 1942; pp. 47-48)

> The nature of the corroboration differs with the two methods employed. In the first...it consists in what may be roughly called a repetition of the same fact... In the second, the corroboration comes from an agreement of many different facts in the determination of the nature of one central fact. In the first, the persuasive force comes from the number of observations and even

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*The important distinction to be made with respect to the exercise of these skills in the direct study of human action (rather than as it is depicted or symbolized through the harmonious configurations characteristic of the various arts) is that the investigator must engage in a task of perceiving, interpreting -- indeed, in some circumstances, actively collaborating with one's "subjects" in a mutual effort to give articulated form to -- incomplete patterns, inconsistent themes, unwitting and unacknowledged dramas.

> more from the number of men who agree with them. It is a social force. In the second, the persuasive force comes from the massiveness of convergent evidence upon the same point of fact. It is the structural force of the evidence itself and is not peculiarly social. (*ibid*., p. 49)

On the basis of Pepper's notion of "structural corroboration," our objective is to develop a preliminary scheme for mapping aspects of imagination giving symbolic expression to the interplay of three distinct dimensions of a general functional interpretation with respect to processes of individual learning in the context of group interaction.

Figure 13.2

Dimensions of Functional Interpretation

1. mode: dimension of manifestation
   - a. group interaction process
   - b. weekly personal documents
   - c. dream reports as volunteered
   - d. pre and post interviews
2. level: dimension of interpretation
   - a. descriptive: linear, molecular content analysis of explicit issues...(what the participants denote as the significant events)...what the lay of the land looks like from outside
   - b. phenomenological: global, empathetic sensitivity to theme and issues (intuitive perception of the connection between covert and overt dynamics)...the feel of what is going on inside
   - c. structural: use of specific models for the interpretation of overt issues in terms of the dynamic structure of covert forces (inferences re what is going on underneath)
   - d. symbolic: significant configurations of multiplicity which in their formal attributes give expression to processes of ego synthesis and group interaction integrating aspects of descriptive, phenomenological, and structural analysis...(perceived configurations which give formal expression to functional relationships between surface and depth -- inside and outside)
3. style: the "meta-" dimension of human events -- generated by the symbolic configurations which serve to integrate:
   - a. a particular mode of manifestation and
   - b. a particular level of interpretation

Data Analysis: Specific. We shall now consider each of the three specific dimensions of expressive behavior in terms of which the exploration of symbolic processes of imagination is to be developed. We outline for each the relevant conceptual background and indicate the range of assessment strategies that we view to be consistent with the purposes of the study.

A. Group Interaction Process: Wit, Humor and Laughter

These subtly related aspects of human nature have always puzzled philosophers, scientists, and literateurs. Among those who have sorely tried their heads in the attempt to provide a comprehensive formulation we find an impressive if unsuccessful crew from Plato and Aristotle, who emphasized ethical implications, to Descartes, the first to emphasize psychological aspects (Piddington, 1958).

After Descartes, an increasing number who attempted general formulations of the nature of humor focused upon the psychological aspects: Hobbes, Locke, Rousseau, Hartley, Hegel, Spencer, Darwin, Bergson, and Freud. By virtue of the intimate connection which he makes between the specific dynamics of humor and his general conception of the organization of all mental activity, Freud's ideas are particularly relevant to the immediate proposal.

Freud's contributions to the psychology of the comic consisted of two distinct emphases: (1) an initial focus upon what he construed as "topographical" and "economic" relations (1905) and (2) a later period in which his emphasis was on what he termed "dynamic" and "structural" issues (1928). His combination of these two emphases produced the general formulae: "The pleasure of wit originates from an economy of expenditure in inhibition, that of the comic from an expenditure in thought and that of humor from an economy of expenditure in emotion." In brief, Freud's conception of humor emphasized the dynamic structure of unconscious mental processes.

To the "economic" pleasures of wit, comedy, and humor which Freud formulated, Ernst Kris added an emphasis upon those "genetic gratifications derived from the pleasure of playful mastery through which a child first exercises his ability to come to terms with conflicts in its inner and outer worlds." Recalling Jean Paul's (Richter) "Wit brings freedom, and freedom wit," Kris suggested that:

> Pleasure in mastery plays itself out in the present, and is experienced as such. Comic pleasure, according to this hypothesis, refers to a past achievement of the ego which has required long practice to bring it about. We experience not only the success of the achievement itself but the whole process by which we gradually attained this mastery.
>
> (Kris, 1938, p. 211)

Kris' discussions of the comic in relation to ego development include two further notions that are of central importance to the present study. On the one hand, he emphasizes the psychological means, through which wit, comedy, and humor provide controlled expression of highly charged aggressive impluses. He suggests in this regard that the capacity to "neutralize" those impulses through such a mode of expression is a crucial determinant of well differentiated, well organized psychic structure. At the same time, Kris states that "as an invitation to...adopt a joint policy of agression and regression," the comic represents a very fundamental dimension of group process and community structure (Kris, 1940).

But, "How does it happen that an alliance is formed between those who laugh" as the result of "an invitation to common aggression and common regression?" Kris holds that "the shaping which the physiological act of laughter undergoes through the agency of the human ego is a clear and impressive example of the fact that everything which we recognize to be a process of giving form and shape to psychic material is to be regarded as an ego function." (*ibid*., p. 238) He emphasizes that the integration and temporal regulations which can only insure the "richness and fullness of the speech of the human countenance" are reflected in this expression which lies on the border between expressive and purposive motor behavior...and that "only because of the wide scope of its significance does it become human and in the Aristotelian sense peculiar to man" (*ibid*., p. 239).

Kris outlines a general conception of ego development and of the organization of thought processes within which wit, humor and laughter are viewed as highly significant aspects of individual imagination in the service of personal integrity and group interaction (Kris, 1950). His conception of personality and thought is analytic in the sense that it is consistent with Freud's basic formulation of the dynamic structure of unconscious mental processes and of the vicissitudes of their developmental patterning. At the same time, Kris' considerations of the role of social reality and experience in the formulation of personality structure gives equal attention to the organization of functionally autonomous behaviors emphasized by Allport, White, and others. Finally, his efforts to provide an analytical description of the psychological processes by means of which the dynamic structure and the autonomous functioning of human action are integrated represents a significant attempt to articulate a concept of thought organization and learning processes consistent with the tacit assumptions of psychologies of ego development.

In summary: Kris' ideas regarding the role of humor and laughter in ego development and group interaction -- his outline of these aspects of imagination as preconscious thought processes which mediate conscious and unconscious dimensions of mental functioning -- are considered to represent significant contributions toward the specification of central processes of learning and "ego synthesis" tacitly presumed by current schemes of psycho-social development. His outline of those central processes thus provides the general conceptual background of the present study.*

An effort to invoke Kris' conceptual orientation in the service of an investigation of wit, humor, and laughter as aspects of group process requires a primary focus on the formal attributes of preconscious mental processes as they assume a functional saliency within the themes and content generated by the group interaction. For this reason the present proposal is a departure from those investigative strategies which give primary emphasis to dynamic inferences regarding latent psychological structures, to the neglect of the actual processes of thought organization manifest in the formal attributes of imagination (e.g., Freud). The study is at the same time a departure from those strategies of interaction process analysis which tend to ignore almost completely issues of hierarchic integration and patterned multiplicity, focusing instead upon linear dimensions of interaction content (e.g., Bales, 1951; Mills, 1964).

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*See Appendix C, Part III.

Studies which investigate the psychology of humor by means of assessment strategies designed to derive general personality traits are also inappropriate to the present focus on humor as a psycho-social dimension of group interaction processes (cf., Flugel, 1954; Cattell and Luborski, 1947; Murray, 1934, 1938; Sears, 1934; Redlich et al., 1951; Wolff et al., 1934). In fact, there appear to be few if any readily available procedures for directly implementing the perspective of the present proposal. Nevertheless, an investigative strategy which shall focus on the phenomena of laughter would seem to have a number of important advantages. In the first place, it derives from a general conceptual orientation regarding important issues of psychological concern within which to relate interpretive observations. It thus provides some basis from which to outline specific aspects of the learning process within the context of more general schemes of ego development. Furthermore, as Koestler notes, "Humor is the only domain of creative (i.e., imaginative) activity where a stimulus on a high level of complexity produces a... sharply defined response on the level of physiological reflexes." (Koestler, 1964, p. 31) Thus laughter represents a highly reliable phenomenological point of departure for the charting of formal attributes within complex psycho-social situations. In brief, the primary focus on formal aspects of complex patterns of psycho-social interaction should, as noted before, provide an important alternative to studies which emphasize either psychological or sociological dimensions of group interaction process.

In this discussion of methods, it is significant to note that Kris was originally trained in art criticism and has written, with E. H. Gombrich, on the formal principles of caricature and, with Abraham Kaplan, on the subject of aesthetic ambiguity (Kris, 1938, 1948). It is significant because, as noted earlier, an investigation with the purpose of documenting aspects of imagination in the service of personal learning requires a research strategy that has much in common with procedures more characteristic of studies of aesthetic or literary works. An investigative strategy consistent with the purposes of this study would seem to require, first of all, that points of saliency in the group interaction marked by the phenomena of laughter be selected as indicating potentially significant intervals to be studied -- that these "intervals" then be examined with an informed and yet free-floating attention to whatever configurations of implication in each instance give expression to a formal structure or integrity of that particular sequence of human events.

It is difficult to be completely explicit regarding such procedures. And for a number of reasons. In the first place, while such methods have an implicit organization that is derived from informed experience with a range of individual cases, the specific skills of observation -- as well as the configurations of integrity that in each case have been the subject of observation -- do not admit of direct application to subsequent cases. Furthermore, the actual process of observation, study and discovery through which those formal attributes of human events are documented is characterized, in each instance, by a preliminary stage of undifferentiated groping toward a sense of what goes with what -- what follows from what -- what leads to what -- what combinations and balances and interplay of aspects determine the relevant "units" of events and observation. And yet, as it works, the method provides results that facilitate documentation because they pertain to highly formal, highly complex, and thus highly salient configurations of human events. Once perceived, of course! That is, such configurations can be much harder to "see" the first time than to "recognize" subsequently. They seem to emerge from a muddle; then, once perceived, they are acknowledged with a, "Why didn't I see that before?" Despite the difficulties entailed by the effort to specify, either the method or the general character of the subject, the art of scientific observation is, as David Hawkins suggests, not only "the essential construction of science" -- but essentially "a way of knowing in which the knower is always the artisan of his personal knowledge."

Such personal "artifice" represents in our view the basis of scientific construction by virtue of the particular explanatory status of the interpretive schemes which it produces. Neither prediction, nor explanation of specific events may be the actual intent. Indeed no array of specific instances of prediction or explanation made on the basis of such a scheme can serve to characterize its formal nature as an abstracted pattern through which human events can be ordered. And yet, because of the abstract, formal, aspects of events ordered by such schemes, they do represent a frame of reference within which predictions regarding specific events become not only possible but more meaningful.

Inference from analogy would seem to be a major resource for going beyond the structure of formulations to which our more explicit strategies of analysis commit us. Analogies of course, must be discovered; they cannot simply be constructed. Thus, they represent intrinsically the dimension of scientific inquiry which renders it truly speculative and exploratory. Analogies must be tested, of course. But the point here is that this comes later; first they must be seen, and the logic of exploration and discovery is in a very fundamental way distinct from the logic of verification and elaboration (Weiss, 1952). Seeing a situation in a new way, looking at it from a new perspective, is the first step. And first steps are at best approximate, tentative, and, when concerted, truly exploratory.*

B. Epigenetic Dimensions of Dream Reports

Freud (1900) defined the dream in very straight-forward fashion as "the life of the mind during sleep." The concept of dreaming, however, raises some very sticky problems (Malcolm, 1962). For example, how can I ascribe to any phenomenon ("having a dream") attributes both of awareness of the "experience" of the dream and of knowing that it was a dream (knowing, that is, that I was not awake and, thus, apparently aware of being unaware both of myself and of my experience in ways that words such as aware, experience, and knowing, normally ascribe)?

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*Such a perspective regarding the reciprocal relationships that exist between contexts of exploration and contexts of explanation appears entirely consistent with the more general notion that veritas implies not merely that which we accept as valid by virtue of our having explicitly tested its objective reliability through some procedure of public evaluation, but furthermore, that which we find to be trustworthy, or worthy of our trust -- or, indeed that which we come to acknowledge as the substance of our trust -- within the total context of our human engagements (Erikson, 1964). From this point of view, to "authenticate", to establish the truth of, is to articulate that to which we have committed our trust, to confirm our personal sense of human knowledge and purpose.

Despite these issues pertaining to the concept of the "dream" or of "dreaming," we all appear to recognize as a familiar phenomenon the act of "telling a dream," and it is that act which we anticipate to provide important data for the purposes of the present study. The thesis here is, in brief, that whatever tacit "rules" generate the familiar "language game" we recognize as the "telling of a dream," that act of telling a dream consists of stylistic configurations of speech significantly related to patterns of mental activity manifest in other areas of behavior (cf., Wittgenstein, 1953).

A wide range of analytical strategies have been developed to "interpret" dreams. Freud (1900) interpreted the "telling of a dream" as a form of mental activity expressing latent "wishes" or impluses in highly "disguised" symbols. On the basis of this principle he developed an elaborate and powerful strategy for inferring the influence of unconscious mental processes on the organization of personality structure and conscious mental activity. More recent explorations, however, have given increased emphasis to the significance of the "manifest" dream, to the organization of the mental activity reflected directly in the "dream-telling:"

> In addition to a dream's striving for representability ...we would postulate a style of representation which is by no means a mere shell to the kernel, the latent dream: in fact, it is a reflection of the individual ego's peculiar time-space, the frame of reference for all its defenses, compromises, and achievements.
> Erikson (1954, p. 143) (underlining ours)

Erikson's approach to "manifest configurations" focuses on "the interplay of commissions and omissions, of overemphases and underemphases." It represents "a preconscious set of general expectations, against which the individual style of each dream stands out in sharp contour."

Within the context of the present study, Erikson's rationale and method is especially significant because it represents an explicit working out in one dimension of expressive behavior of the more general thesis that "any item of behavior shows a continuum of dynamic meaning. Reaching from the surface through many layers of crust to the core..." (*ibid.*, p. 140). It represents, accordingly, a procedure for developing a general psychology of both surface and depth in terms of the formal attributes of expressive modes of human imagination.

Jones (1962-a) has outline a strategy designed "to facilitate the use of dreams as research material in 'growth' psychology by introducing a method which addresses itself to the epigenetic structure of manifest dreams" -- a strategy to study dreams "not as sources of handy leads in therapy but as the overdetermined products of yet-to-be charted ego functions." Jones' strategy thus shifts the emphasis from what dreams mean to how they mean. He attempts, in other words, a general strategy for exploring the process of dreaming as a distinctive form of imagination in the service of ego synthesis. He adopts the "epigenetic" perspective with respect to the manifest dream as an imaginative process of symbolization on the basis that this dimension of current analytic theory represents the nexes of genetic, adaptive, and structural points of view. His central hypothesis is that:

> ...a manifest dream is the product of a confluence of psychodynamic forces: (1) a motivating repressed wish of infantile origin; (2) the defense ego which so discharges the energy of the repressed wish as to maintain a healthy state of sleep; and (3) the synthesis ego which so governs the setting, style, and rhythm of the dream's formation as to support a subsequently adaptive state of wakefulness. We describe this third process as the preconscious re-differentiation and re-integration of preadaptive epigenetic successes and failures in the context and under the problematic pressure of phase-specific readaptive crises.
>
> (_ibid._, p. 43)

His hypothesis is based on the assumption that "eventual knowledge of ego synthesis will rest heavily on our ability to observe...shifting vicissitudes of phase specific and auxilliary organ-made correlations" (_ibid._, p. 40).

Jones' illustrations of his epigenetic method of analysis are drawn from dreams reported by students participating in "an undergraduate course in educational psychology in which it is deemed appropriate for persons who aspire to guide the mental processes of others to confront themselves with their own" (_ibid._, p. 43-44). In view of his emphasis upon the formal aspects of the manifest dream report as a basis for specifying "yet-to-be-charted" functions of ego synthesis within the context of a general developmental psychology, Jones' "epigenetic" strategy represents the particular procedure most relevant to the purposes of this present study proposal.*

C. Figurative Speech

Current investigations of the nature of language and speech provide conceptual perspective and specific strategies that are directly relevant to the present proposal. For example, current psycholinguistic studies emphasize the hierarchic structure of language. The complexity of "nested interdependencies" which generate the grammar of our speech patterns manifest a "serial ordering of behavior" that is structurally analogous to that of the information processes of speech perception (Miller, 1965). Thus, as Miller and Chomsky point out, "It is probably no accident that a theory of grammatical structure can be so readily and naturally generalized as a schema for theories of other kinds of complicated behavior" (Miller and Chomsky, 1963, p. 488).

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*See Appendix C, Parts IV A and B.

Wittgenstein's philosophical analysis of the nature of language is also relevant to the present concerns with regard to the organization of behavior and thought (Wittgenstein, 1953). Suggesting that a language is a form of life and that, therefore, to imagine a language is to imagine a form of life, Wittgenstein begins his analysis by asking what is common to all those linguistic activities which makes them into a language or parts of language. And he concludes with the view that such phenomena have no one thing in common, but that they are all related in many different ways. He suggests that if we look closely at language in use, at language as a form of life, "we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail" (ibid., p 32e). Wittgenstein refers to these similarities as "family resemblances" and suggests that, in discourse, as in spinning, they represent "a thread we twist fibre on fibre...(that) the strength of the thread does not reside in the fact that some one fibre runs through its whole length, but in the overlapping of many fibres."

Thus, in response to the question as to whether we can have a game without either definite rules or explicit boundaries -- in response to the question as to what it can mean to "know and not be able to say" -- Wittgenstein argues that the standards of formal rigor and logical structure implied by such questions are themselves illusory, that all thought is surrounded by a halo, and that "it is the order of possibilities that is the order common to both world and thought."

Quine's images of linguistic action reflect a similar contextual emphasis on the interplay of forms of language and forms of life.

> Neurath has likened science to a boat which, if we are to rebuild it, we must rebuild plank by plank while staying afloat in it. The philosopher and the scientist are in the same boat...Our boat stays afloat because at each alteration we keep the bulk of it intact as a going concern. Our words continue to make passable sense because of continuity of change of theory: we warp usage gradually enough to avoid rupture...To vary Neurath's figure with Wittgenstein's, we may kick away our ladder only after we have climbed it...Analyze theory-building how we will, we must all start in the middle. Our conceptual firsts are middle-sized, middle-distanced objects, and our introduction to them and to everything comes mid-way in the cultural evolution of the race... In an arch, an overhead block is supported immediately by other overhead blocks, and ultimately by all the base blocks collectively and none individually; and so it is with sentences, when theoretically fitted...Such sentences (the scientist's) are like cantilever constructions, anchored in what they say of familiar objects at the near end and supporting the recondite objects at the far end. Explanation becomes oddly reciprocal....
>
> Quine (1960)

Alston (1964) in order to classify the "different sorts of actions that involve the use of sentences," distinguishes: (1) locutionary acts (linguistic acts which do not go beyond the utterance of a sentence -- acts that is, which do not entail any behavioral effect) (2) perlocutionary acts (linguistic acts which result in some behavioral change in a hearer) and (3) illocutionary acts (linguistic acts which, while they go beyond the mere utterance of a sentence, do not necessarily produce any kind of effect. The point of Alston's classification is in the emphasis which it gives to "the fact that the meaning of a linguistic expression is a function of what users of the language do with that expression." He argues that the notion of an illocutionary act is thus the most fundamental concept in the philosophy of language. This he contends because such an act does not depend upon any behavioral or environmental conditions -- or even upon a speaker's belief that such conditions hold -- but only that the speaker take responsibility for their holding. In other words, the speaker's tacit commitment to implicit "rules of the language game" suggests an important relationship between illocutionary acts and a wide range of non-linguistic activities.

This emphasis to context, purpose, and tacit rule or convention which modern analytical philosophy gives in its description of linguistic acts is thus quite similar to the general perspective in psycholinguistic analysis represented by investigators such as George Miller:

> ...what is the scientific status of a rule as an explanatory concept in psychology? It is not a law, for it can be violated, and often is. Ordinarily, one would like to define a rule as an explicit statement. But this conception of a rule as an explicit statement is ill-suited to the situation in psycholinguistics, for it is generally the case that people who can follow the rules with amazing skill are often completely unable to provide any explicit statement of the rules they are following. If people know the rules, therefore, they must know them implicitly. The only way we know that they know the rules is by inference from the fact that, under certain carefully specified circumstances, their behavior conforms to them, and from the fact that they can recognize what it means to make a mistake.
>
> G. Miller (1964)

This emphasis upon implicit patterns, conventions, or rules represents, at the same time, a perspective which has been extended to such general psychological concepts as motivation, behavior, response, action:

> Given an appropriate set of concept for the classification of behavior falling within the purposive, rule-following model, concepts like that of 'drive', 'motive', 'instinct' and 'need' would find their place as supplementary concepts for explaining particular sorts of departures from this model; or for answering higher level questions about the conditions which facilitate and hinder learning such goal-directed sequences and which account for individual differences in goal-directedness.
>
> Peters (1958)

Our immediate purpose, however, is to note more explicitly a general frame of reference regarding the nature of language within which the implications of such approaches may provide direct leads in the study of metaphoric imagery or figurative speech. Such a frame of reference is, in our view, most adequately provided by a general perspective regarding the relationship between language and action that focuses on those orders of natural linguistic events which in their formal attributes serve to transform and integrate discontinuous levels of meaning structure. Such a general perspective presumes a similarity of structure to all natural processes of transformation which create the unique boundary conditions informing any system of natural events -- rather than emphasizing the external laws governing that system (Hawkins, 1964). With regard to those natural orders of events comprising human action, this point of view emphasizes what Polanyi terms "subsidiary modes of awareness": those "tacit forms of knowing reflected in particular styles of inquiry and performance -- skills which cannot entirely be formulated" (Polanyi, 1958).

It emphasizes what Dewey termed the importance of "processes through which one type of functional situation and attitude in experience passes out of and into another...the technical or utilitarian...into the aesthetic, the aesthetic into the religious, the religious into the scientific, and this into the socio-ethical (Dewey, 1916). Such a perspective provides a general frame of reference within which specific analyses of symbolic dimensions of language and speech can be directly related to original issues raised regarding the nature and development of personality structure and the organization of thought processes.*

Thus while every experienced event can be differentiated with respect to a perspective of analysis which makes explicit what Dewey referred to as "the sequential bonds of nature" (a point of view which provides the basis of the various strategies and paradigms represented by our explicit techniques of science, and art -- one which provides for the "regulation of ongoing and incomplete processes in behalf of selected consequences" -- each experienced event reflects also the immediate dimensions of an "aesthetic" mode which "bind the constituents of that occasion into an integrated whole." It is this aesthetic dimension of experience which provides the immediate awareness of ends as both implicitly present in experience and as the tacit grounds of those goals toward which the articulation of experience is fashioned. From such a pragmatic point of view the "aesthetic dimension" represents both the context and the culmination of the human capacity to "have an experience" (Dewey, 1934). And thus, a more complete description of the aesthetic dimensions of events and experience would provide a description of the processes through which one type of functional situation and attitude in experience passes out of and into another.

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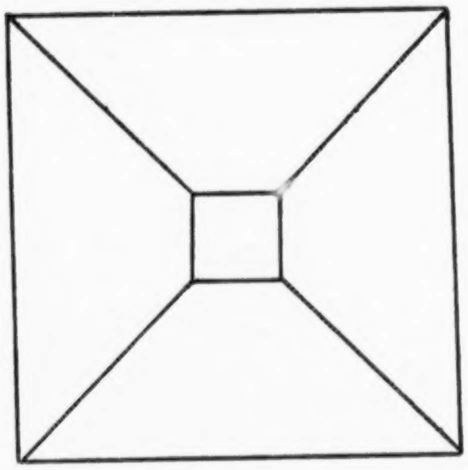
*We emphasize here Dewey's general notion that the process of inquiry is best characterized as a series of approximations motivated by the need to more adequately structure any situation experienced as vague, as undifferentiated -- that, within such an undifferentiated state, both means and ends are problematical -- and that resolution, once attained, is characterized by a new coordination of attributes, a new coordination of instrumentalities and consummations -- that, finally, logical theory amounts to an account of the generating conditions of such reflective experience.

Dewey's point of view regarding the role of the aesthetic dimension in human experience is consistent in its general outline with Whitehead's philosophy of organism, Langer's emphasis upon symbolization as "the essential act of mind," and Cassirer's expansive examination of symbolic forms within the context of cultural patterns and processes (Whitehead, 1938; Langer, 1957; Cassirer, 1953; see Chapter 15, pp. 15.25-15.26). Other specific lines of recent work, however, appear to be more directly relavant to the focus of the present study. Thus, for example, Aiken advocates a formulation of the contextual relationships between the aesthetic and the cognitive that develops implications of Dewey's consummatory response pattern. Aiken explores the potential significance of "a theory of the aesthetic use of symbolic forms that is hospitable to any and all modes of symbolization which may enhance the satisfactions we derive from art -- a theory which bears significant implications for the role of reason in the conduct of life (Aiken, 1962). In a similar way, Cavell emphasizes the implications of Wittgenstein's general approach to philosophical problems specifically with regard to the nature of metaphor, figurative speech and aesthetic judgment (Cavell, 1965). Like Aiken, Cavell contends that there are no generally valid criteria for denoting an aesthetic object or the aesthetic mode of experience -- that, indeed, even the effort to make an absolute distinction between literal and metaphoric uses of language breaks down the moment we neglect crucial issues of specific human purposes within specific contexts of experience: "At some point, the critic will have to say: 'this is what I see.' Reasons -- at definite points, for definite reasons, in different circumstances -- come to an end." The most significant aspect of Cavell's address to aesthetic experience, however, is to be seen through his use of Wittgenstein's general notion of a solution to a philosophical problem. For he views such a solution as actually a dissolution, a going through a process of inquiry which brings experience back into a natural form of life with the result that the problem vanishes.

Aldrich (1963) gives a similar emphasis to the forms of experience in which the percepts, rules and conventions of life and art can only be known: "Even the bedrock data of art are accessible only to one who can look at things, including works of art, in the relevant way: You must see what grounds the expressive portrayals in which they occur before you can even begin a line of significant talk about art or understand another's utterances in that mode of expression." Suggesting that the concept of "work of art" raises issues similar to those raised by the concept of a "person," Aldrich outlines a notion of "holophrastic" perception -- a non-specific, multiplex, mode of perception which manifests attributes of two distinct modes of perception: (1) the "observation" of physical events and objects and (2) the "prehension" of aesthetic objects. The "holophrastic capacity" is, according to Alston's formulation, the particular mode of perception which reflects most dramatically the principle of transformation which generates all modes of perception: the phenomena of "aspection." "Aspection" is Aldrich's term for the general phenomenon of the change of aspects or reversals of figure and ground in such "ambiguous" pictures as the well-known duck-rabbit, staircase or cube. Aldrich, however, depicts this phenomenon of reversible construal by means of a figure which combines aspects of form and content implicit in the images which intrigued Gombrich (1962) and Wittgenstein (1953).

Figure 13.3

Phenomenon of "Aspection"



An examination of the ways this figure is seen provides vivid evidence that seeing is itself an achievement among alternatives and not a simple act of attending to "what is."

As noted earlier in connection with Cavell's paper, there is a point at which the distinction between the metaphoric and the literal breaks down. It is possible, however, that we can only see the point of this argument by virtue of that perspective from which the contextual and the purposive become root metaphors of the process of inquiry. Thus, within the contexts and purposes of that more general image of inquiry we might note some further attributes of metaphor which may serve to guide the present study.

Black distinguishes between metaphor as (1) a linguistic substitution which "plugs a literal gap" in the existing resources of a language and (2) a linguistic transformation which generates an interaction between the focus of the literal discourse and the ground frame or context of that discourse. This latter aspect of metaphor, in our view, represents a "reflexive" or "middle-voice" dimension of figurative speech that brings the point of view of Aldrich and Gombrich regarding the aesthetic object directly to bear on the linguistic act of figurative speech.

Our talk about talk is intrinsically metaphoric or multiplex for "ordinary human discourse" as a verbal mode of symbolization inevitably entails, suggests, allows for, and occurs within a context of overlapping and discontinuous individual purposes and expectations. Our purposes inevitably generate a multiplicity of meanings. Some are acknowledged as the themes of communication. A good many, however, remain covert and unacknowledged. Accordingly, what is required for the purposes at hand is not a strategy for charting figurative speech which shall serve as the basis for an exhaustive differentiation of such multiple messages implicit in the ordinary language of verbal human discourse. Nor do we need one more strategy for explaining away multiplicity through an exercise of analytical perseverence. Instead, we require a perspective for noting the strategic spots in actual human discourse at which the "plursignations" of metaphoric speech naturally arise (Burke, 1955; Wheelwright, 1954). Our strategy is, thus, to note the connections between the formal attributes of figurative speech and the multiplicity of human needs and purposes which find a symbolically integrated expression through this dimension of human interaction.

The required procedures can be developed, we believe, by exploiting the unique contributions of both psychological and humanistic approaches to figurative speech. More specifically, we believe that the strategy of choice should reflect a synthesis of current psychoanalytic theory and modern approaches to literary criticism. Both represent general rationales and methods for tracing patterns of implicit meaning within the context of analogously subtle orders of symbolic multiplicity. Both emphasize thematic sensitivity to the formal attributes of verbal expression through which such patterns of meaning become manifest. Each, however, addresses analysis to significantly different dimensions of the symbolic process. Psychoanalytic approaches emphasize the covert image, interpreting symbolization in terms of a regression to more primitive processes of mind in which the conceptual organization of verbal thought "gives way" to a flow of visual images determined by unconscious emotional needs (Freud, 1911; Silberer, 1951; Jones, E., 1916).* Humanist critics, while they regard symbolic imagery to be of vital importance in the organization of a work of literary art, give primary attention to the formal attributes of the verbal medium through which figurative speech becomes a language of significant gesture and symbolic action (Blackmur, 1952; Burke, 1957;

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*Here, in order to underline an important distinction between these two approaches to processes of symbolism, I refer primarily to more orthodox psychoanalytic statements which emphasize the unconscious, "primary processes" of symbolization. As I have indicated earlier, contemporary psychoanalytic theory, through its emphasis upon the "structural" point of view, gives greater attention to the ego's role in determining the preconscious dimensions of symbolic processes.

Tindall, 1965; Wheelwright, 1954; Fiedelson, 1953). Thus, in the case of psychoanalysis we have an emphasis upon strategies for tracing the psychological significance of "pictoral images determined by inner necessity" (Silberer) - in dreams, neurosis, and ritual. And, in the case of literary criticism, we have an emphasis upon the formal attributes of a poetic process which "names and arranges and thus arrests and transfixes its subject in a form which has a life of its own" (Blackmur). Within the immediate context of the present proposal, the specific question which leads to a detailed consideration of these two divergent yet related approaches to symbolization is: how might we best proceed in an effort to chart figures of speech which in the immediacy of personal encounter with an educational process reflect a "kind of excellent dumb discourse," one that integrates through symbolic processes of imagination diverse orders of psychological and verbal resources.

Our sense of that discourse begins in feeling. By an unexpected turn of phrase and mind we are moved to realize a complex association of perceptions. But, like Coleridge, we no sooner feel than we seek to understand. We seek to understand more clearly what it is that we come to see in connection with such an unexpected turn of phrase. Further, and more importantly still, we are moved to consider how such figures of mind and speech move us. We are moved, that is, to examine more closely the formal attributes of such figures with the intent of seeking hints regarding the underlying processes of mind that they give expression to.

Robert Frost suggests that "when you hear a figure of speech you know that someone is thinking." Thus, like laughter in group interaction and like the report of a dream, metaphoric imagery represents a natural starting point for the exploration of complex processes of psychological synthesis. Figures of speech represent natural starting points for charting imaginative processes of thought that give an integrity of style and personal form to our capacity to mean more than we say as we say more than we realize.*

We concede that in conceptual analysis, at least, "addiction to metaphor is held to be illicit, on the principle that whereof one can speak only metaphorically, thereof one ought not to speak at all (Black, 1962). We agree, however, that "the nature of the offense is unclear" (_ibid_). For example, while responsive to an image of figurative speech: "as wild beasts gather their limbs together for an attack, so language also should gather itself as it were into a coil to acquire force," we would attempt to ask important questions regarding the nature of such a process of gathering, and of coiling. As Kris suggests, "Ambiguity is not a disease of language but an aspect of its life process"; we would, in brief, know more of both aspect and process.

Our particular rationale and method is based on the assumption that any figure of speech "may have several distinct meanings; several meanings which need one another to complete their meaning; or several meanings which unite together so that the (figure) means one relation or one process" (Empson, 1930). We assume, in other words, that metaphor represents an aspect of language which cannot be defined on the basis of an objective dictionary, but remains an aspect which must be charted as _a range of ordered implications_ within a specific context of usage. We, thus, adopt Empson's notion of metaphor or ambiguity as one which "gives room for alternative reations to the same linguistic event by focusing on the formal composition of that event."* At the same time, however, we argue that a methodological emphasis upon formal analysis of linguistic events must itself be grounded in a functional theory regarding those processes of mind which generate such acts of linguistic multiplicity. And in this regard we believe that it is the intrinsic, tacit interplay of the forms of language and forms of life which generates the significance of those specific linguistic acts selected for study (cf., Kris, 1948).

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*In speaking of the "figure that a poem makes," Frost notes that "every single poem...is a symbol small or great of the way the will has to pitch into commitments deeper and deeper to a rounded conclusion and then be judged for whether any original intention it had has been strongly spent or weakly lost (in the effort)...to produce a momentary stay against confusion..." Frost contends that "poetry is simply made of metaphor -- (as) is philosophy -- and science." And he suggests, furthermore, that "unless you are at home in metaphor...you are not safe anywhere...because you are not at ease with figurative values..." (Frost, 1966).

And, thus, specifically with regard to figurative speech in the service of personal learning through group process, we assume that the multiplicity of language as significant action or gesture "collects at precisely those points of greatest imaginative effectiveness to create a quality of tension realized -- of tension acknowledged, cultivated, and resolved through symbolic expression" (Empson).

To summarize, we suggest that, like humor and dreams, figurative speech manifests in highly condensed form aspects of personal integrity which are significant both to the "macrogenetic" patterns of human development and to the "microgenetic" processes of individual learning presumed by our formal educational efforts. More specifically we suggest that, through its forms and functions, metaphoric imagery or figurative speech reflects dimensions of language as significant personal gesture analagous in organization and development to unspecified processes of "ego synthesis" presumed by a number of current models of educational development. We suggest, finally, that an analysis of the forms and functions of figurative speech as it occurs within the process of personal learning through group interaction -- like our approach to humor and dreams -- can contribute to an understanding of symbolic processes of ego synthesis.

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*See Appendix C, Part V.

In Conclusion. Humor, dreams, and metaphoric speech represent such highly organized, such highly condensed, processes of thought that it seems somewhat paradoxical -- somewhat inconsistent with the nature of imagination -- to become engaged in a rather discursive outline of procedures appropriate to their study within a specific educational context. And yet, a certain discursiveness -- as well as a related inability to exemplify actual procedures outside the context of observation itself -- is, we believe, an accurate reflection of the unexplored educational significance of those processes of thought. The scientific and rhetorical puzzle we confront here is analogous in form to the one that we encounter in our efforts to formulate a "logic of the creative process":

> He who denies that there can be any rationale to discovery and he who insists that the structure of the act of moving from antecedent to consequent must in every way be as specific as those termini, will find this account so far to be intolerable. But the former arbitrarily defines all movement, in which something new is achieved, to be mysterious, while the latter arbitrarily turns all relations into terms. The former's conclusion is itself a novelty, and

> in any case can be put aside as one which must await the outcome of the attempt to make the process intelligible. The latter is in a stronger position. He is to be met, however, by making a distinction, a) between the unrepeated and the unrepeatable, and b) between process and principle.
>
> All thinking, no matter how swift, occurs in time. To come to a conclusion we must go through a process in which a leading principle is enabled to function. For various purposes it is desirable to abstract the logical leading principle from the process, 'logic' from 'psychology', but the one does not occur without the other. Thinking is an event and often eventful.
>
> Weiss, 1952

Thus, our outline of procedures consists of a statement of general rationale, together with a discussion of the specific skills of "contextual observation" which, in our view, can attain the objectives of the study. In sketching contexts of observation -- as in any form of representative description, one must depend for his effect upon the balanced interplay of many tentative, approximate lines of representation, rather than upon theoretical argument. Few of our materials are new. What is unique and significant, we believe, is the way in which familiar resources have been ordered -- the way in which the relationships among dimensions and modes of thought and action have been organized for study.

It is not our intention to propose an exhaustive, or even a representative, analysis of study groups in terms of the three dimensions of imagination chosen. Nor is it our intention to provide a detailed or consistent analysis of even one group in terms of relationships between those three dimensions and other possible strategies for analyzing group structure and process or individual learning and educational development. Our purpose is, rather, to use one group and the individual processes of interaction and thought which it generates as the basis for developing the dimensions of a general analytical scheme. Thus, we initially select from the group and individual expressions those sequences of events which, by virtue of an immediate phenomenological saliency, represent, in our judgment, critical incidents of the thought processes that we wish to chart. These "critical incidents" are then examined with the intent of abstracting formal attributes of imagination which can be more generally related to the specific contexts of their educational functioning.

The immediate measure of our scheme's reliability can be appropriately determined by the extent to which its use by independent judges in independent contexts yields a consistent documentation of formal attributes of symbolic processes of imagination or "ego synthesis." A more general measure of the scheme's validity, however, must subsequently be determined by investigating the extent to which the configurations of imagination which it charts bear significant relationship to functional dimensions of individual and group educational experience documented by independent modes of analysis.

In order to suggest a number of relevant directions for such a subsequent investigation of the scheme's general significance as a method of analysis, Figure 13.4 places the specific dimensions of this study within representative dimensions of analysis generated by alternative investigative strategies.

Figure 13.4

The Study Dimensions in Relation to Selected Alternative Strategies of Analysis

(cf., Figure 13.1, p. 13.16)

levels of analysis	representative modes/modalities		
	dream report	group process	figurative speech
descriptive linear, molecular content	content analysis of manifest dream (Hall and Van de Castle, 1966)	interaction process analysis (Bales, 1951) sign process analysis (Mills, 1964)	content analysis of personal documents (Stone et al, 1957)
symbolic patterns of imagination	configurational analysis of epigenetic dream processes (Jones, 1962a)	configurational analysis of humor in group process (thesis)	ambiguity (Empson, 1930, 1951) metaphor (Burke, 1954)
structural covert dynamics	thematic analysis of latent dream symbols (Freud, 1900)	thematic analysis of covert group dynamics (Bion, 1961)	associative anamnesis (Deutsch and Murphy, 1955)

Significance

In its immediate objective and investigative strategy -- as well as through its implicit address to the structure of human events -- the proposed study which we outline here is intended to bear direct significance for educational thought and practice. The study is construed as a significant effort to develop appropriate strategies for the analytical description of those psychological processes of transformation and integration presumed by general schemes of educational development which emphasize the hierarchical ordering of sequential stages of mental activity (Bruner, 1964; Erikson, 1959; Flavell, 1963; Perry, 1967; Piaget, 1967). By virtue of its focus upon these central processes of mind as they emerge within the phenomenological context of an educational experience designed to facilitate individual learning through group interaction, the study should, in addition, generate implications for educational efforts intended to cultivate the interplay of cognitive and emotional aspects of learning (Jones, 1962b; Mills, 1964; Morimoto, 1967; Semrad and Arsenian, 1951). The study should serve, that is, to extend our understanding of educational programs intended to develop "concepts and skills necessary for the recognition of the multiple relationships among the complex of words, acts, cues, emotions, values, purposes, and causalities which constitute a particular instance in human life" (Perry, 1954; cf. also: Auden, 1956; Bronowski, 1965; Jordan, 1964; Royce, 1965). At the same time, by virtue of its emphasis upon configurations of thought -- by virtue of its emphasis upon the form rather than the content of group interaction -- the study should contribute to a perspective regarding behavior in small groups that can "bridge the conceptual gap" between current psychological and sociological approaches to interpersonal events (Bales, 1951; Bion, 1961; Miller, 1963).

The investigative strategy of the study is intended to make a contribution to the development of perspective and procedures for invoking more directly in the conduct of research in educational psychology professional skills integrating clinical and educational processes. By virtue of its reliance upon interpretative observation as the strategy of choice for documenting symbolic configurations of personal integrity manifest within the immediate context of human events, the study is construed as an effort to contribute to a scientific understanding, a scientific trust, of the "core of disciplined subjectivity" that lies at the center of educational and clinical processes as it lies at the center of processes of educational and clinical research (cf. Erikson, 1964).

Through its implicit address to the structure of human events, the proposed study is intended to have implications for educational thought and practice that are more difficult to specify but no less significant. In one sense this implicit address has found a measure of expression through noting David Hawkins' emphasis upon the artifice of personal knowledge as the essential construction of "the art that is science." In another sense this implicit address finds indirect expression throughout the proposal in a tacit regard for the inevitable interplay of subject, method, and style through a process of learning about the processes of imagination and their role in the learning process. In still another sense this "reflexive" or "meta" dimension of significance can perhaps be expressed by invoking the "structure" of comic metaphor as a specific subject of psychological inquiry -- by applying it to the "meta-dimensions" of psychoanalytic theory construed as a general system for psychological inquiry (cf. Rapaport and Gill, 1959).

> Break forth what will, I will learn my origin (Oedipus)
> Let the shield go, I'll get another (Archilochus)

Thus, rather than emphasizing an elaboration of the dynamics of unconscious mental processes implicit in the dramatic image of the tragic hero's address to the sphinx's riddle (the riddle of man's origin) the comic alternative would suggest, instead, that we begin with the figure of a man's capacity to live by his wits, whatever his origin or circumstances (cf. Oedipus and Odysseus). As an alternative to the psychology of human experience which elaborates the image of the tragic hero's fate, our implicit address to human action would instead invoke the image of the comic hero as an exploiter and artificer of unexpected and, not infrequently, unsettling alternatives:

> A desperate small fellow, inexcusably declaring himself for a social savior; an utterly self-centered rogue... representing a universal gesture...unto all the high and mighty; a coward who runs away from his enemies for the moment, and then dances on their graves with godless cheer; a fast talker, a hoper-for-the-best and believer-in-the-worst; a creature of infinite ambition, infinite responsiveness, and infinite appetite -- ...a figure of salvation, surviving against all odds.
> (Whitman, 1966, p. 52)

So much for the potential substance of a comic vision -- for the resiliance of an address to human events which gives expression to unexpected human alternatives, however ludicrous, as opposed to an address which gives expression to inexorable human fates, however heroic. But what of the artifice of such a vision, what, that is, of the comic poet and his art as distinct from the comic hero or fool?

It is the business of a poet, says Aristotle, to make myths. Assuming metaphor or figurative speech to be the essence of myth, we would entertain the suggestion that, as Kenneth Burke argues, a comic perspective regarding the metaphoric structure of symbolic actions should enable us "to be observers of (ourselves) while acting" -- it should offer a "perspective by incongruity...a kind of transformation at one remove, got by inquiry into the process of transformation itself" (Burke, 1954).*

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*For related studies of expressive or symbolic modes of human action which stress "the permanent poetic forms that underly changing historical emphases", (see also Scott Buchanan, 1962, and William Empson, 1938).

And thus, in conclusion, we reach the general notion reflected throughout the entire proposal that the ultimate metaphor for discussing the freedom of human action is the image of the comic poet, the image of the poet, "who, with high hearted and shameless innocence" commends his work to posterity with the charge:

> Keep my verses in your closet with the apples
> So that all year long your clothes may smell of - wit
>
> (Aristophanes - Whitman, 1960)

In retrospect, such a comic alternative to the images of human action implicit in our psychologies seems entirely consistent with Freud's earlier invocation of the poet Virgil: "If I cannot bend the Gods above, I shall move the infernal regions." (title page, _Interpretation of Dreams_).*

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* This emphasis upon a "comic" alternative to the "root" metaphors of psychoanalytic theory entails the risks inherent in all debunking strategies. The caricature is intended to bring into relief psychoanalysis as a theory of _neurosis_ by emphasizing alternative metaphors for a psychoanalytic theory of _health_. What such a "game of language" may not give adequate expression to is the importance of a therapeutic interaction between the heroic weaknesses of neurotic power and the comic power of a healthy inferiority. This third order of caricature might tentatively be outlined as that encompassing both education and therapy (cf. Angyal, 1965; Koestler, 1964).

The art that is science is a unique genre... The essential construction of science is a personal way of being related to the universe. This way has many expressions and can have many more, in conduct, artifact, or text; but it is primarily a way of knowing, and the knower is always the artisan of his personal knowledge.

David Hawkins, "The Informed Vision"

Comedy, in its early stages passed unnoticed, because it was not as yet taken up in a serious way.

Aristotle, Poetics

How extraordinarily rich in meanings the process of laughter is. It represents aggression and seduction simultaneously, and is associated with birth and rebirth and procreation, is the sign of godlike strength and so of godlike privilege, but is also the sign of the rebellion of the human race, and one feels continually forced to the conclusion that ultimately defense against anxiety, master of anxiety, and pleasure gain, are compressed together in the one act... But how does it happen that an alliance is formed between those who laugh -- that laughter becomes a group situation?

Ernst Kris, Psychoanalytic Explorations in Art

It is certainly true that the dreamer is too ingenious and a amusing, but it is not my fault... All dreamers are insufferably witty.

Sigmund Freud, Letter to W. Fleiss (1899)

You know somebody is thinking when you hear a figure of speech.

Robert Frost, somewhere

Humor, Discovery, and Art, the reason for this seemingly perverse order of arrangement...will become apparent as the argument unfolds.

Arthur Koestler, The Act of Creation

In sum, the comic frame would enable people to be observers of themselves, while acting.

Kenneth Burke, Attitudes toward History

CHAPTER 14

RECENT DEVELOPMENTS AND CURRENT PROSPECTS IN OCCUPATIONAL FACT MEDIATION*

Overview

The following Chapter concludes our exhibits of current exploration and documentation of "new directions," our placing of choosing as ground in life styling. Consisting of a brief statement of collaboration on issues of process through the concept of mediation, the Chapter reflects some of the common concerns that serve to inform our current thought and work. In addition, it serves here as an introduction to several of the epistemological and pedagogical issues to be considered more systematically in the next section.

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*This Chapter is based in part on a paper of this title (ISVD Project Report No. 9) circulated by David V. Tiedeman and Gordon A. Dudley.

The Subsumption of Media by Mediation

From Media to Mediation. The turning of occupational facts/data[*] into information is a personal and educational process. Therefore, the important question in relation to media in occupational information is the means by which media actually prove to mediate the personal educational process. We elect to address herein the most important of our questions in vocational guidance; namely, how may we better the personal educational process associated with vocational development?

Tiedeman's experience with a recent book by McLuhan and Fiore provides interesting evidence in support of our thesis. The younger of his sons left his copy of this book on a table in their living room for about a week. Tiedeman, however, never became particularly interested in the book during that time, because in his passing glances he consistently saw *The Medium is the (Message)*. That seemed a clever, though not an intriguing title. Then one day he suddenly "saw" (for the first time) the book's actual title: *The Medium is the Massage* (McLuhan and Fiore, 1967), not Message. Tiedeman's double take and realization connected then with his recollection that he had agreed to speak in the near future on the subject of "information mediation." Thus, a hurried turn to this book reinforced his recognition that, in occupational information as well as within the broader range of communication treated by McLuhan and Fiore, the media are not the message. Indeed, media can never be the message; only the facts which media convey are the message. The *media* themselves only become important in message transmission when they actually *mediate* transmission -- that is, when they actually massage the occupational information process as persons are exposed to occupational facts/data.

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[*] (As previously defined in Chapter 12).

Epistemology and Pedagogy in Mediation. We introduce this experience of Tiedeman's with the McLuhan and Fiore book in order to place reports on recent media developments within a conceptual framework on which we have both been working independently but now find that we can herein express collaboratively. We feel that our new common framework is of considerable importance in determining the significance of current work in media development. Why?

Primarily because the point of view we outline in this paper is one which derives important aspects of its validity from being realized again and again through a wide range of personal experiences with facts and ideas. We try here to give you that important personal experience of discovery, insight, and acquisition in the acknowledgement that one can understand himself as a process.

Our "frame of reference" with regard to the interplay of facts, ideas, purposes, and action represents what we understand Polanyi to mean when he speaks of personal knowledge; that is, a form of orientation which, while it cannot be specified in the abstract, serves in any given context of personal encounter to articulate immediate concerns with issues of broader relationship and relevance (Polanyi, 1958). Therefore, in order to treat aspects of our immediate topic in relation to issues of broader educational concern, we shall address ourselves first to two assumptions which we consider implicit to much of the work in this field today. These are assumptions which we consider to be *in*consistent both with crucial principles of educational process and with the rationale of the Information System for Vocational Decisions.

The first of these assumptions pertains to the nature of knowing and the known. There are current applications of recent media developments to issues of vocational information which appear to presume that facts, data, or information consist of bits of knowledge which correspond directly to that presumed to be the real, the true and the knowable. In brief, knowing and the known are presumed by these efforts to comprise a direct, linear relationship, both in the abstract and as we realize them as dimensions of particular circumstances. An acceptance of this assumption invokes an epistemology stemming from the great English Empiricists, Hobbes, Locke, and Hume and in our sciences finds perhaps its most thoroughgoing implementation through the rationale and methods of those guided by logical positivism. It engenders, however, a position entailing serious limitations as we attempt to implement our current technological resources in the service of personally determined career development.

The second of the assumptions is in an important sense subordinate to the first, for it pertains to the nature of the relationship between acts of knowing or learning and those of teaching or counseling. This assumption suggests that, on the basis of a "correspondence" theory of knowledge, we can presume to select those aspects of the known and knowable which shall be most effective in determining a subsequent course of events toward an end that we value and which, as "means" toward that end, we call "learning." In brief, the assumption here is that we can determine, in advance, both goals and procedures appropriate to the educational process in its distinctive human immediacy and variability.

These two assumptions, one "epistemological," and the other "pedagogical," are inconsistent with one of the most crucial principles of our own current work, namely, that both knowledge and the process of knowing are functions of a personal and collaborative context of exploration and confirmation -- a context which is itself defined by a nexus of human purposes expressed both overtly and covertly, both tacitly and articulately.

The alternative position from which we speak suggests that our talk about media cannot look in one direction only. It cannot look solely toward facts, data, information -- in isolation from persons and processes. In short, we hold that the reciprocal interaction between the knower and known entails a "transactional" perspective and array of procedures more aptly denoted by the notion of mediation. The final turn of this argument is that, because of the interplay of the tacit and articulate dimensions of knowing in the personal act of learning, the experience of mediation is that of a massage. In other words, we inevitably encounter the new with a habitual tensing of our intellectual musculature, with the result that its meaning takes initial form after that which we have long known and accommodated ourselves to. Only after we have worked with (and perhaps more importantly still, been worked on by) a new possibility do we relax our habitual styles of address to the point of seeing more clearly that something new has indeed been going on in, as well as around, us [cf. Piaget (Flavell, 1963) on "assimilation" and "accommodation".]

Our advocated perspective is "transactional" by virtue of the implication that processes of teaching and learning are construed as individual and collaborative acts of "sampling," from among a wide range of on-going events (both personal and environmental), those configurations of meaning and implication which best serve to differentiate means and ends, processes of imagination and structures of knowledge, and acts of discovery and principles of verification. Within this "transactional" perspective facts, data, and information derive their significance as exemplifications of meaningful coherence among stable dimensions of events reflecting multiple principles of order (Neisser, 1963). It is this transactional perspective regarding the interplay of information and imagination which brings our ideas in harmony both with current developments in discovery teaching and the "new" curricula (Bruner, 1966) and with the "new" self-knowledge and creative learning developments (Kubie, 1958). It is, in sum, a point of view from which we risk inviting the student to take advantage of our capacity to learn through his ability to teach us.

In presenting our point of view for evaluating the application of media to issues of occupational information within the context of personally-determined career development, we stress three "facts," namely:

1. The subordination of the concept of media to the concept of

mediation implies that, in relation to occupational information, media represent means in the service of vocational development. Thus the first "fact" to be developed more fully is that of occupational mediation in relation to the cultivation of *vocational development*.

2. The concept of vocational development as the goal of occupational mediation raises the issue of *personal responsibility* and involvement in the determination of those ends. This is the second of the "facts" within the context of mediation to be considered.
3. Finally, a discussion of vocational development and occupational mediation within the context of formally organized educational structures raises issues with respect to broader implication and *implementation*. Thus the third "fact" to be discussed is our responsibility and opportunity to consider means by which mediation of vocational development can be more effectively accomplished for all citizens of the United States through the engagement of systems and structures beyond those formally organized for educational purposes.

Vocational Development as Goal of Occupational Information Mediation

As indicated in Chapter 7, we have moved far beyond the vocational psychology of World War II which was primarily based on the prediction of success and/or satisfaction in educational and vocational opportunities.

Throughout the previous chapters we have made the points that: 1) vocational choice is now nested into vocational development; 2) vocational development into self concept and personality development; 3) personality development into curriculum development and socialization; and 4) organization and economy are emerging as two powerful forces occurring in interaction with individual initiative to forge vocational identity. Thus we trust that the following two conclusions have credibility, namely:

1. We presently have a new goal for occupational information, that of vocational development, not mere occupational entry and success; and
2. Our enlarged understanding of vocation in personality now gives us social as well as individual means whereby we may "massage" those research facts of vocational development which we have sketched for us in the interest of more fully helping persons turn those facts into occupational information for themselves. When persons do so they move toward vocational maturity.

Personal Responsibility for Goal Determination during the Mediation of Occupational Facts/Data: Needed Structure of Authority in Turning Development into Maturation

Personal Responsibility and Vocational Maturity.

We know, and our critics keep insistently drawing our attention to the fact, that the society, its economy, and its organizations help persons to harmonize initiative and efficiency during the course of personal evolution in vocational identification and personality development. However, we counselors and other educators still have a staunch interest in cultivating individualization during the course of the socialization of that collaborative activity known as work. Our resolution on this score brings personal responsibility for goal determination into the mediation of occupational facts/data and maturation into fore as goal of vocational development. Personal responsibility for goal determination is a necessary part of personal development through the educational process. Therefore, it must remain a central index of our success in bringing the goal of vocational development into the mediation of occupational information for the purpose of cultivating vocational maturation. Let's now attend to this fact more carefully.

Personal Responsibility and Pedagogy. The strategy for cultivating personal responsibility during education has one of its foundations in the pedagogy of discovery teaching such as Bruner (1962) recommends. In discovery teaching, goals and structures which are originally those of the teacher are offered to students with expectation that the student will incorporate them into his own response repertoires. This pedagogy recognizes the process of incorporation and mediates the responsibility of the student to take a structure known to another and to make it his own. During this process the student himself discovers the teacher's structure, thereby achieving insight into the subject which the teacher offers him for his understanding.

The pedagogy of discovery teaching tutors the student in seeing a teacher's understanding of a phenomenon in relation to the teacher's own desire to share that understanding with him. This pedagogy expects that there will be a placing of shared goal determination into the awareness of the student. It also offers the student practice in determining specific, personal goals within a general set, or range, of goals permitted by the structure of the teacher's subject as well as by the personality of the teacher involved in letting another learn by himself within broad limits defined by the teacher.

The pedagogy of discovery teaching opens the door for individual action during learning. However, the application of goal determination to other areas of living involves the assumption of initiative in goal determination in the absence of a pre-determined set of possibilities. This is the process of generalizing a discovery pedagogy upon which counseling focuses. The matter of choice becomes central in personal goal determination.

A Structure of Educational Authority Appropriate for Vocational Maturation. The central part of our position as described more fully in Chapter 17 is that the cultivation of understanding of decision-making in the paradox of living takes place in an educational context. In the educational context involving the discovery pedagogy, the responsibilities for efficiency and initiative can be divided between counselor and teacher.

The teacher has prime responsibility for the goals of accuracy and discovery with particular respect to the subject he is assigned to teach. The teacher is only secondarily interested in the emergence of insight on the part of his student during course of discovery as well as in growth in understanding of self-as-process under expectation for personal responsibility in learning.

The counselor on the other hand has primary responsibility for seeing that the goals of insight and self-as-process emerge in the context of discovering a subject at school and in generalizing this awareness to contexts of choice in vocation and life in which goals can only be determined personally. The counselor in his turn has secondary interest in those goals which are primary for the teacher, namely the goals of accuracy and discovery in relation to subjects. The counselor is interested in sharing only the expectation that the student will both be accurate and have discovered, but he cannot deny these functions in educational context however much he personally favors the emergence and exploitation of personal initiative in students.

The application of this model of responsibility assigns to the counselor an interest in seeing that discovery teaching is part of the educational establishment in which he is employed. The model presumes, in addition, that the counselor will have a teaching interest in the paradigm of decision-making as it has application both to choice in vocational and other life goals and to learning about self during the course of experiencing and modifying the consequences of a personally-elected goal. For this reason our expectation is that explicit teaching in decision-making should be a part of the guidance program of an educational institution. Through the ISVD Project (see Chapter 12) Tiedeman intends to make the teaching of decision-making explicit in counseling. That system represents Tiedeman's current effort to act upon the understanding of the model outlined here.

Finally, the appreciation of choice paradox in life evolves over a period of time. In this time, the explicit concepts of decision-making become more practiced, understood, and automatic. The critical tasks of the counselor towards these ends are to analyze the *projections* about choosing in which his students engage. The two conditions of choosing in which projection must be analyzed are those previously designated, namely choice-election, and goal-determination. In either case the counselor has interest in ministering to projections of either an internal or an external kind. The counselor attempts to mediate to the internal projections of *guilt* in ways such that his inquirer's attention to his own initiative and his practice of action under guidance of his initiative does not have anxiety and/or psychosomatic effects. The counselor attempts to mediate the external projections of *shame* so that blame becomes effectively assessed by an inquirer engaged in such projections. The counselor's goal is to bring about greater awareness of evaluations and process possibilities for the inquirer during the course of discussions of such projections.

Note our tri-partite contribution to the theory of personal development through vocational development in this discussion. We believe that the mediation of occupational facts/data in an effort to turn them into occupational information for which an inquirer is personally responsible requires all three enumerated conditions: namely, 1) a structure of educational organization in which there is the expectation of personal discovery and the division of teaching and counseling responsibility in which this can go on without serious threat to the individual initiative and responsibility of the students; 2) an explicit teaching by counselors and/or teachers of decision-making, particularly educational and vocational decision-making, such explicit teaching being offered in compatibility with the discovery teaching in other subjects; and 3) an evaluating and/or monitoring system which is explicitly attune to the development of choice behavior in inquirers.

Prospects for Technology and Commerce in the Mediation of Vocational Development for Vocational Maturity

From Theory to Technology in Mediation. It is one thing to enunciate both a new goal and the structure of authority which will be required to attain that goal without serious threat either to individual liberty or to societal disintegration. These matters have been attended to in the prior two sections. It is still another thing, however, to say how vocational maturity can be cultivated within the required structure of authority. We do believe, however, that we have hit upon a good means to our end.

Occupational Fact Mediation in the Environment of an Information System for Vocational Decisions. As has been indicated in Chapter 12, the ISVD will be fashioned to mediate choice behavior. Several aspects of that system bear particular emphasis within the context of our immediate considerations here.

One aspect of ISVD in need of special attention is that our word "Information" denotes the placing of facts/data into the context of use. Thus the user or inquirer becomes an explicit part of our denotation of "system." We intend to place a student in potentially repeated interaction with a computer-centered environment programmed, not for prompt reinforcing of stimulus-response contiguity, but for an inquirer's personal inquiry.

A second noteworthy aspect of ISVD is that it will be constructed so as to facilitate an inquirer's learning how to harmonize his personal goals and their consequences in a real world by means of repeated inquiries in specific realms of social activity. Because the ISVD will put the inquirer in direct relation with his evolving history and intentions to the extent that such can be motivated and represented through the numbers, letters, and processing available in computer reckoning, it becomes possible to belie the fears of those who view such automation as a process for making decisions for, rather than with, people.

This brings us to the third and final particularly noteworthy aspect of ISVD. Our primary professional task, both in ISVD and even more generally in guidance, is the construction of a meta-system which permits analysis and response in terms of the majority of the variables of anticipated personal determination (see Chapter 13). For, in sum, the ISVD will represent a first-time physical simulation of the "outside" which a person must first learn to bring "inside" and then to act toward knowing that it is there but knowing also that he need not be "driven" by it, that he can place it in the service of his own personally-determined career development, in the service of his present and evolving maturity.

A Structure for Mediation of Vocational Maturation in the ISVD. Three specific parts of the ISVD will define its particular contribution to the needed process of mediation. One of the specific mediational parts of the ISVD are the media themselves. The ISVD will attempt to take advantage of all the gains in mediation now available to us because of current and extensive media-work.

A second mediational part of the ISVD will be its materials. The materials of ISVD will include the best of findings in vocational development and career linking. Also included will be materials on opportunities, their characteristics and projected possibilities. Finally, materials will include a newly constructed curriculum designed specifically for the mediation of the developmental tasks of career decision-making and development.

A third mediational part of the ISVD will be the computer modulation of access and response in a time-shared mode. The modulation of the totality of formally construable career development through computer control brings timing and supervision into focus in the mediational process for vocational maturation. Timing will be important in terms of 1) frequency of access, 2) sequence of item presentation and data processing and the monitoring of response to same, and 3) intervals between all three kinds of parts. Supervision has importance in terms of 1) the monitoring built into the inquirer-machine interaction itself, 2) the monitoring of the counselor in his supervision of the inquirer-computer interactional environment, and 3) the monitoring of the vocational educator as he engages persons in the tasks of role assimilation which follow upon the making of a vocational choice, however tentatively that choice is held, and the undertaking of vocational preparation.

The ISVD will be on the frontiers of all three realms of the mediational process designed for vocational maturation. However, the ISVD will not be alone in any of its approaches to this condition. University and other non-profit organizations with personnel for technological development in education and profit-making organizations with similar staffs all now have at least one representative case participating in developing the parts of the mediation needed for vocational maturity. There is a considerable mass now existing for creation of occupational fact mediation. In conclusion, let's look at the potential economy of such mediation as we also first swiftly review our argument in its totality.

An Economy for Mediation of Occupation Facts: The Counselor and His Mediation of Vocational Maturation

Summary and Challenge. McLuhan and Fiore use their book, The Medium is the Massage, to convey awareness of a quoted statement attributed to A.N. Whitehead; namely, "The major advances in civilization are processes that all but wreck the societies in which they occur." We elect to summarize and conclude on this profound and somber note.

We have attempted to make us all aware that we are on the frontier of a new era in vocational guidance. This new era can combine the recent knowledge in vocational development and media which we have gained in order to mediate vocational maturation by massage of self development with the timing and logical processing available in wedding vocational development materials and media presentation under computer control of a great deal of that mediation. Our realization of this new possibility in our society would constitute a major professional advance on the order of the civilization advances to which Whitehead alludes. Maturation for self awareness in career constitutes a change in our civilization not now accepted in our educational and labor establishments. If we can conceptualize that advance, advocate it, demonstrate it, and sell it we will have massaged ourselves and our society so that we may all but wreck both. However, we remind us in conclusion, that the mediation of this process of incorporation of change is the professional forte of us counselors. Therefore, we remain convinced that we all can both incorporate the change we have outlined into our own repertoires and personality and see that the new technology can mediate vocational maturation for all citizens without disaster in our society. It's worth a try. It's now within the realm of our possibilities.

A New Frontier and Its Needed Economy. Government and profit, as well as technologically grounded non-profit, organizations are now each carefully scrutinizing the technology associated with counseling and guidance. Under such scrutiny, interest, and potential competition, our guidance technology is likely to experience marked change in the near future, probably within the next five years. Let's not be frightened of this potential for change. Let's get ourselves informed of it. Let's keep watch over its theory and thereby give direction to its evolution. We believe we all can do so if we remain interested in mediation for vocational maturation, not just in media for vocational development.

A prime question in the changes which are on our frontier have to do with the construction of an economy in which industry can profit. We do not mean to frighten you counselors, but we do suggest that we stay loose as this economy is reformed. There will be more than enough compensation for each of us. But what is needed?

Marvin Adelson, System Development Corporation, recently only half jokingly suggested to the Panel on Counseling and Selection, National Manpower Council on which he serves, that the government pay career development money directly to citizens on a regular basis in the future, not to counselors. Such an economy would put us counselors into competition for the governmentally-subsidized money of citizens who could then be accurately conceived as our customers and could thereby gradually but more definitely correct any of our misunderstood theories and practices. This economy would also permit the insertion of computer-assisted support systems for vocational decisions into the technology of which our improved service to users could be founded.

Preposterous? Possibly. However, we are on the brink of a revolution in our field. New solutions are bound to be needed. Let's not fight them; let's mediate them!

SECTION IV: CONCEPTUAL INTEGRATION

Overview

Our purpose in this section is to outline a point of view integrating the major issues of theory and procedure generated by the preceding chapters. The section consists of a general statement designed to clarify our frame of reference regarding overriding issues of conceptualization implicit in our current work. As an introduction to that statement, we shall review some of the leading threads of the Discussion thus far, emphasizing in particular the implications of the recent period of reassessment as well as the new directions indicated by current projects.

The first section of this book presents a sequence of individual papers documenting the developments in method and theory which, with an increased regard for the persons who chose and who attain membership in occupational collaborations, gave rise to the period of conceptual "reassessment" reported in the second section.

The period of reassessment documented in our second section was initiated by Tiedeman's reflections during the year which he spent at the Center for Advanced Study in the Behavioral Sciences. It was then that he first outlined in some detail the basis of a crucial distinction between the approach to issues of career development that he and his associates were developing at Harvard and the approach of Donald Super and his associates at Columbia. Furthermore, Tiedeman emphasized at this time that fact that the basis of his distinction between these two approaches raised fundamental issues regarding a more general conceptualization of scientific theory and method. It was this emphasis upon the broader implications of his initial "stock-taking" that confirmed and extended the significance of the theses originally advocated by Kehas and Field through their concern for neglected aspects of individualized process, style, purpose, and situation in career development.

In commenting on this shift in conceptual orientation, Dudley and Fletcher reviewed a number of the issues that emerge in connection with (1) the concept of differentiation as a developmental concept, (2) the relation between the concepts of purposeful action and entrepreneurial behavior, and (3) paradigms of functional analysis in the behavioral sciences. Their discussion of the concepts of purposeful action and entrepreneurial behavior focused primarily on the principles of hierarchical organization which both those general notions presume. In his "creativity and career" paper, however, Dudley extended this original analysis to outline a more general notion of "event structure." On the basis of this general notion, he then posed three issues as those most crucial to the further specification of purposeful action: First, the need for explicit, logical principles of organization or integration of the differential processes entailed by the concept of adaptation. This Dudley termed the "formal" issue regarding event structure. Second, the need for an analytical description of the processes by means of which such integrated structures emerge from less differentiated patterns of behavior. This he terms the "developmental" issue. Third, the need for more explicit consideration of those "ecological" dimensions which determine the range of flexibility in patterns of human adaptative behavior. This he termed the "dynamic" issues of interaction between structures of consistency and the processes of innovation whose functioning those structures "direct."

Both Field's and Tiedeman's concept of purposeful action and Fletcher's model of entrepreneurial behavior emphasize developmental structures of cognitive differentiation; both are focused upon the development of structured means for progressive discrimination in thought and action. Whether the underlying psychological processes presumed by such "means" structures are construed as differentiating between the currently desired and the currently experienced, on the one hand, or between the potentially rewarding and the unnecessarily problematic, on the other, these two approaches to adaptive behavior appear fundamentally congruent by virtue of their primary emphasis upon paradigms of "phase structure" to characterize and to facilitate such developmental processes. In his "Creativity and Career" chapter (Chapter 10), however, Dudley began instead with the assumption that there is a fundamental distinction between a process of development and the structure which either mark or facilitate its sequential ordering. One implication of this assumption is that paradigms of the structures through which, or by means of which, processes of developmental adaptation occur are analogous to roadmaps and milestones vis-a-vis particular journeys or paths toward maturity. Thus Dudley attempted to outline some of the "vicissitudes," some of the "unexpected turns" in purposeful behavior occasioned by our symbolic processes of imagination. His notion in this paper was that our symbolic processes of preconscious mental activity represent a crucial range of mind through which, for example, we gain in adaptive prowess by virtue of a capacity to trust our ability to take risks with our very sense of agency (cf. Chapter 18).

By emphasizing processes of thought which manifest the "presence" of the past in the potentiality of the future, Dudley attempted to inventory some basic resources for conceptualizing aspects of ego synthesis, integration and congruence through paradigms of diversity, multiplicity, and symbolic action.

Tiedeman's more recent statements regarding the foundations for a language of career development reflect an increasing regard for such "preconscious" processes as an unexplored domain of mental activity crucial to the integration of reflective experience and purposeful action. Both the ISVD project (Chapter 12) and Dudley's thesis (Chapter 13) provide immediate contexts for further explorations regarding the organization and implications of these aspects of thought.

Beilin (1963), Borow (1961), and others have argued for more informed attention on the part of investigators in Career Development to the canons of theory building and methodological implications which are the focus of studies in the philosophy of science. We are in sympathy with any effort to both broaden and deepen inquiry in this direction. At the same time, however, we do not subscribe to the notion that any independent domain of inquiry, such as the philosophy of science, can be directly imported and applied in order to solve our conceptual problems for us. We do not wish to imply that we refuse to avail ourselves of the insight of others. Indeed, we have taken some care to inform ourselves of the assumptions and strategies which characterize contemporary philosophical analysis. We merely wish to emphasize that the particular mode of philosophical analysis which we have found to be most helpful in connection with the immediate issues of our own research is one which, combining the tradition of American pragmatism and more recent post-Wittgensteinian approaches to the nature of language, emphasizes that philosophical analysis is a process of investigation intrinsic to the very conduct of inquiry. Thus, rather than attempt to model our current efforts in conceptualization after the specific canons of theory construction advocated by the proponents of any particular school in the philosophy of science, we have, instead, attempted to apply our own style of analysis to a number of models and philosophies which bear on the behavioral sciences. In this effort to explore and formulate in clearer fashion the philosophical issues implicit to our own work, we have sought to determine, with respect to each model or philosophy considered, the extent to which the assumptions and purposes on which it is based are congruent with our own. In sum, we are not at all impersonal nor are we impartial in our assessment procedures, for we begin with the assumption that any particular mode of thought and the results that it engenders is a function of the purposes that inform it. Therefore, in attempting to clarify the assumptions and implications of our own work we begin with an analysis of the work of others that focuses upon the purposes that inform such work.

CHAPTER 15

THE FORMS OF LANGUAGE AND THE FORMS OF LIFE IN THE CONDUCT OF INQUIRY*

Overview

Our intent in this chapter is to outline a general perspective for discussion within which our current theories of behavior may be viewed as partial and particular dimensions of the potential languages for the conduct of inquiry, particular examples, that is, emphasizing specific aspects of a more general and ordinary language of human conduct. The themes and issues regarding an interplay of (1) the forms of language through which we conduct our studies and (2) the forms of life which are implicit in our languages of conduct engender the issues implicit in the "science" and "theory" concerns originally outlined by Tiedeman (Chapters 6 and 7). These are the issues which are central to the Dudley-Fletcher discussion (Chapter 8); they are, furthermore, central to the increased emphasis upon multiple or "preconscious" modes of mental activity reflected in our current efforts (Section III). In the following statement we shall seek to explore more directly the implications of our intuitive conviction that such processes of inquiry and discussion which shift speculative range and measure of analytical focus between modes of thought that are explicitly textual, articulate, and focal, on the one hand, and those that are tacitly contextual, non-verbal, and subsidiary, on the other, represent perhaps our most general paradigm of the full range of reflective experience and purposeful action. In exploring this conviction we shall begin with a discussion that focuses upon issues of theoretical systematization and which concludes with a consideration of the more general context from which those issues emerge and from which they derive their substance.

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*This chapter was written by Gordon A. Dudley.

INDIVIDUAL PURPOSES AND THE NATURE OF HUMAN EVENTS: BEHAVIORAL MODELS

Introduction: Systems, Structures, and Processes. Our view of the various issues raised by the preceding chapters leads us to conclude that a continuing and more explicit analysis of those patterns of abstraction which determine the range of "event structures" presumed by our several orders of scientific inquiry shall prove to be crucial to a more adequate conception of purposeful behavior. Our preliminary thoughts concerning such an analysis lead us to suggest a general point of view which, we feel, offers an important guide to more sustained inquiry in this area. We shall first outline some of our ideas with respect to this perspective and then, in light of it, offer further comments regarding a number of alternative approaches to issues of human purpose and the conduct of inquiry in the behavioral sciences.

We begin with the assumption that, within any particular system of events, the essential attributes of "event structure" (the stability, the developmental patterning, and the relative autonomy of the processes which comprise that system) are determined by discontinuous orders of periodicity in the "events" which characterize the boundary between events occuring "within" that system and "within" its environment.

For example, what we know as the "macrocosmic" order of physical processes specified by classical mechanics represents a point of view which presumes the potential relevance of isolating dimensions of event structure such that when a description of an antecedent state of that system is provided, specific attributes of subsequent event structure are invariently determined. The Newtonian system of cosmic regularities in event structure, is, of course, an abstraction. It enables us to make explicit one mode of natural periodicity with respect to the structure of events by virtue of its formal capacity to ignore other dimensions of event structure which obtain within intersecting space-time continuums. In other words, the Newtonian system works by virtue of its capacity to presume isolated systems of event structure, systems that is whose organization is not seriously "contaminated" by events occurring "outside" it. Such isolation is, of course, never complete. All such systems of abstraction break down at that point where the assumption regarding functional isolation results in our ignoring events which are relevant to the particular scope of our inquiry. The potential or "real" nature of event structure is, as David Hawkins (1964) argues, continuous and infinite, while our capacity to render it intelligible remains relative and approximate always. While, as Hawkins puts it, "Nature was kind to Newton in giving him planets not much troubled by multiple gravitational interactions" (ibid., p. 79), we must determine with respect to our own inquiries whether the system of event structures appropriate to the data which Newton handled, is equally relevant to the data of our system. In a very important way, Newton's universe was rendered pythagorean by virtue of the fact that it made explicit an order of events somewhat isolated and "cold" by the fact that the clockwork of his system was to no immediately appreciable degree contaminated by the heat and noise which is so characteristic of (and, indeed, crucial to) behavioral systems of event structure (cf. Schrödinger, 1944).

Today we recognize that, at the other end of the physical continuum, the microcosmic processes made explicit by quantum mechanics manifest patterns of indeterminacy which are rendered intelligible through statistical analyses. In other words, faced with a world of contingent fact, a world of random events whose structure is rendered orderly in terms of its boundary conditions rather than in terms of its dynamic organization, alternative procedures for determining event structure become crucial.

The Newtonian system of mechanical determinacy and modern systems of quantum indeterminacy represent specific examples of the fact that "abstractions, like academic disciplines, prosper through increasing division of labor; but (that) prosperity brings them together again in ways to which the habits of specialization blinds us" (Hawkins, _ibid_., p. xii). Indeed, it would appear that our traditional divisions of scientific labor are most crucially blind precisely with respect to those regularities of human events which characterize processes of biological evolution, purposeful behavior, and cultural innovation. For between these two points on the natural continuum of event regularities (the macrocosmic and determinate on the one hand, and the microcosmic and indeterminate on the other) emerge patterns of event regularity and innovation which are characterized by a selective responsiveness to surrounding events--processes which are neither functionally isolated from nor entirely determined by alternative systems of event structure. It is these orders of human events which are not appropriately characterized by either of the two models of scientific explanation elaborated by the traditional division of scientific labor.

To raise the question, "How do you know that you know whatever it is that you think you know regarding the nature of human behavior?" is to pose a rather general and formidable set of conceptual issues. Indeed, perhaps the only response of equal generality and power is in turn to ask, "What do you mean, 'how do I know that I know...?'"; and then, "What difference does it make anyway?". Yet such forensic gambits, while they implicitly give expression to the three major dimensions in which further discussion may be pursued, are not readily acknowledged without further exploration by those who, like the psychologist in his engagement with individual behavior, contends that the basis of his professional acts represents a scientifically valid form of knowing and inquiry. Within such a context of concern, we tend to assume, rather, that to presume such a professional commitment is to assume the burden of one's implicit contentions regarding both knowing and knowledge.

If we are unusually candid--or if questioned to the point where our comments encircle the pattern of habits by means of which we ask and answer questions--we may admit that we do not know, really, that, in fact, we know of no final way to be entirely certain that any paradigm or explication of method is adequate to, consistent with, or exhaustive of the presumptions of our professional intent. Thus, we generally contend that in the absence of any "rock bottom" confidence regarding the substance of our professional engagements, we have evolved a not entirely self-defeating set of procedures for exploring the relevant issues of knowing, valuing, and acting. We thus acknowledge, in other words, that, by virtue of the professional identity we assume, we commit ourselves to a continuing dialogue with respect to the consistency and the fruitfulness of the grounds upon which we generate our statements of fact, generalization, inference, and judgment. Accordingly, we would explore here those dimensions of such a discussion that appear to be implicit to the work of investigators who seek to describe and explain the processes of individual choice behavior.

Deterministic and Contingent Models of Behavior.*

Though our predominant models of scientific inquiry and explanation are appropriate primarily to those orders of natural events for which we may presume essential stability of both system structure and system boundaries, each of the several models of scientific explanation would appear to have generated its specific behavioral analogue. For example, the behavioral analogue to the deterministic system of mechanics represented by Newtonian physics would appear to be the form of operationalism which B.F. Skinner has developed through his work in operant conditioning (Skinner, 1961). This point of view represents, in brief, an argument to the effect that the basis of valid general statements with respect to the structure of behavior derives from our ability to elaborate a set of experimental procedures which shall invariantly determine the circumstances under which specified behaviors shall occur. Given 1) an array of initial or "operant" behaviors (which are considered random in the sense that we presume to ignore the structural attributes of their immediate occurrence) and 2) any finite, discrete set of observable behaviors specified as the outcome of a concatenation of events, the logical form of our ability to "characterize" the structure of behavior amounts, from this view, to our ability to demonstrate control over the conditions under which the criterion events shall occur. When applied to those dimensions of event structure which characterize individual behavior, this model of the scientific enterprise is frequently debated on the grounds that it presumes an inappropriate set of values with respect to the manipulation and control of human subjects (cf. Skinner, 1961; Rogers, 1961a&b). A logical analysis of the model, however, suggests equally serious reservations, for as a general explanatory strategy this approach appears to be inappropriate to those dimensions of events which are determined by structural changes in the relationship between any behavioral system and its environment. Furthermore, to the extent that this approach to events is limited in strategy to the specification of those conditions under which subsequent behaviors can be modified in specifiable and predictable ways, the program is severely limited with respect to a wide variety of important questions regarding the nature and determinants of original, "operant" behaviors. Thus, as a model, it is seriously limited in its power to clarify the psychological processes or structures through which processes of individual activity are modified. In other words, as a paradigm of analysis this approach is consistent with precisely those attributes of event structure which appear to be most characteristic of the evolving, purposing, and innovating behavioral systems, we know as human acts.

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*For an alternative treatment of these issues on the basis of different assumptions and with significantly different implications - see Cronbach (1957).

The behavioral analogue to the models of explanation presumed by modern quantum theory and statistical mechanics is, we suggest, represented by the "trait-factor" approach to personality (cf. Cattell, 1959). We recognize that, as Meehl (1956) points out, the output probabilities of the experience table of empirical contingencies which is presumed by this model may be improved by supplementing standard curve-fitting procedures with approximations derived from a theoretical construct regarding the underlying determinants (or structural attributes) of the data which appear in the cells of that table. However, as a general strategy of explanation, this model nevertheless presumes that the relevant order of behavioral events is determined by the boundary conditions of the system to which it is applied. As a paradigm of analysis, it represents, in other words, a strategy for displaying those attributes of behavioral systems which can be made explicit by presuming that the structure of events between and within systems can be ignored. Furthermore, by virtue of its total reliance upon a criterion of positive prediction, this approach to the organization of human behavior is inconsistent with general paradigm of explanation specified by those who seek to analyze the "structure" of science: the formal attributes of a true prediction are limited to an array of empirical contingencies, whereas the model of scientific description and explanation generally noted presumes a more generalized pattern within which a set of specific events are logically related to an array of more general principles (Nagel, 1961; Scheffler, 1963). We shall consider at a later point in this discussion several implications of the fact that a failure to predict overt behavior does not necessarily entail a failure of understanding, a breakdown or inconsistency in more general explanatory constructs. Nevertheless, the logical failure of the actuarial model of predictive contingencies to be especially noted here is that whatever refinement in predictive power we may provide with it, such improvements prove irrelevant to the formal attributes of the more general construal which, presumably, is our ultimate objective.

The investigator who adopts this paradigm of analysis must seek that set of procedures which shall enable him to attain the highest ratio of "hits" (to "misses") with respect to the subsequent behavior of his "subjects." Agreement on this point regarding such a "minimax' strategy seems to be acknowledged by all parties to the general area of discussion which has become known as the "Clinical vs. Statistical Prediction debate" (see Gough, 1962). This concensus appears to be aptly expressed by Paul Meehl:

> All methods must be subjected to the test of success-frequency. This is the 'tie that binds'. It binds together Freud and Thurstone, Cattell and Allport, Rorschach and Hathaway, Tiedeman and McArthur.
>
> It can serve as a basis of communication among psychologists of very different persuasions, because it transcends all personality theories and cuts across all methodological preferences. For the business of theories and methods is to fit the data, which are behaviors." (1956, p. 163)

And, thus, like the strictly deterministic model of explanation , this strictly contingent model is logically irrelevant to those attributes of event structure which appear to characterize the adaptive behavior of organisms, those which appear to characterize purposeful action and cultural innovation. For the structure of events which characterizes purposeful behavior includes both those areas of relative indeterminacy which represent the "domain" of potential goals not yet discriminated and elected as well as those areas of relative determinacy which reflect established commitments. Purposeful action or entrepreneurial behavior is characterized on the one hand by a continuous and perhaps infinite dimension of the potential relationship between an open energy and information processing system and its environment--and, on the other hand, by the discrete and finite dimensions of that relationship both as reflected in the actual "flights and perchings" of organismic processes and as formulated in our approximate and discontinuous models of explanation.

Formal Models and Cybernetic Analogues. In order to circumvent the limitations which we view to be inherent in the two explanatory strategies discussed thus far--in order to adopt a strategy analagous to that by means of which a calculus is provided for the continuities of motion within any physical system--we might begin with the assumption that the structure of events which characterizes individual choice behavior can be approximated by a mathematical function. In other words, perhaps we begin with the assumption that what is really real about the structure of individual choice behavior is its congruence with a formally consistent and abstract system of axioms, postulates, and deductive rules of inference. Such an approach to the structure of human activities tends to generate the kind of psychology anticipated by Plato or Leibnitz and leads to the more current contentions that the nature and limits of our scientific explanations of human behavior are essentially coterminous with our capacity to formulate that behavior by means of mathematical models or to simulate it with electronic devices. To evaluate the advantages and disadvantages of this assumption we consider more explicitly three examples of formal strategies for characterizing event structure which recently have received wide application to the serial order of purposeful behavior: (a) mathematical models of modern game theory (b) statistical approaches to learning and (c) the formal attributes of cybernetic devices.

Modern game theory as initiated by von Newmann and Morgenstern (1944), and as presented by Luce and Raiffa (1957) reflects a development and application of mathematical notation which emphasizes both the contingency and the sequential nature of choice processes. For this reason, modern game theory and models of economic behavior would appear to be essentially congruent with the point of view expressed in our earlier discussions. There are, however, two aspects of this approach to behavior which appear somewhat less congruent with the emphasis that we seek to make explicit. In the first place, the theory of games would appear to presume a linear conflict model of interaction and communication which we view to be inconsistent with crucial dimensions of individual and collaborative behavior. Furthermore, in view of the fact that "fixed and final" goals appear required by that model in its present stage of development (cf. Wiener, 1948, 1954), we question this approach as an adequate basis for assessing utilities within the larger context of human purpose and historical processes. (For a beautifully incisive and illuminating critique of modern "strategic" thinking as applied to issues of the utmost human concern see Anatole Rapoport, (1964). We regard this book as essential to anyone who would seek some perspective concerning "strategy and conscience.")

We concede that in many games (games of life, games of war, and games of learning) a play can be made only by assuming that the rules of the game are at least partially known and that our moves are not apt to render those rules less reliable. In other words, we concede that any game requires some minimal degree of stability with respect to the boundary conditions of the system which represents the field of play. However, what in principle can be regarded as a theoretical resource for clarifying the inconsistencies and the inadequacies of the assumptions with which we enter any game must not, at the same time, commit us irretrievably to assumptions regarding the nature of the relationship between our game and the reality which it is designed to approximate. While clarity is to be deemed an asset, it is, as George Miller points out, not always to be sought at the price of becoming entirely literal minded. Indeed, the general intent of this entire discussion is to emphasize the crucial importance of a more reflective concern for the relationship between our commitment to irretrievable patterns of the articulate, on the one hand, and tacit dimensions of commitment to other modes of awareness, on the other.

The statistical approaches to learning which Bush and Mosteller (1951, 1955, see also Bush, 1960) and Estes (1950, 1959) have developed also emphasize the serial order and probabilistic dimension of behavior and thus may appear to offer strategies or models appropriate to the perspective advocated by our discussion. Certainly the step-by-step nature of the learning process is made an explicit aspect of these approaches (Sternberg, 1963). Whether the data comprise the sequence of response obtained from a traditional learning experiment or whether they represent the serial attributes of a communication network (Shannon and Weaver, 1949), those data are construed as representing stochastic processes-as characterized by a mathematical analysis which presumes a sequence of events each event of which is to some degree determined by chance (Snell, 1965). The issue with respect to the appropriateness of such models is, first of all, whether the significant points in the sequence of choices which characterizes purposeful behavior can be construed as reflecting merely trial-to-trial changes in response probabilities to the boundary conditions of the experimental situation. Furthermore, we must also ask whether a model of learning data (or a model of a communication network) is necessarily the same as a model of the learning process (or a model of communication). As George Miller puts it, "How well the data that we collect (and try to understand with our models) represents the processes we hope to study raises questions that run well beyond the proper bounds of any mathematical discussion" (Miller, 1964, p.220). The essential burden of our entire discussion is to outline the boundaries of a broader context within which such issues become not peripheral but central.

If our interest in formulating a general model of purposeful behavior consisted primarily of an application of modern game theory or models of statistical decision processes to the broad range of individual risk-bearing and collaborative transactions for which we have expressed a concern, our efforts would necessarily be subject to the reservations outlined above. However, as indicated earlier, the general notion of purposeful behavior with which we are concerned here represents, instead, an attempt to incorporate important implications of cybernetic technology within a theory of career development and a general philosophy of education. In this regard, a distinction must be made with respect to the cybernetic model itself. On the one hand it represents a particular elaboration of mathematical concepts regarding the discontinuous, the contingent, and the indeterminate associated with the work of Maxwell, Gibbs, Boltzmann, Schrödinger, and Heisenberg (cf. Wiener, 1954). In this sense, the cybernetic model represents an array of statistical techniques applied to a communication system viewed as a sequence of events analagous to what statisticians call a time series (cf. Shannon and Weaver, 1949). This is a perspective with respect to the cybernetic model which, indeed, would appear to render it subject to the same limitations that we have suggested earlier regarding the dimension of quantum indeterminacy. In this sense, it represents a point of view regarding the structure of events which is restricted to defining the boundary conditions of any system in terms of aggregate probabilities. On the other hand, the cybernetic model suggests also approaches to behavior represented by the work of Walter (1963), Ashby (1960), von Neumann (1958), Newell and Simon (1956, 1961), Turing (1950), as well as Miller, Galanter, and Pribram (1960). Thus, rather than attempt to provide a formal description of the goal directed behavior of a servo system (either mechanical or natural), we might attempt, instead, to instruct (program) that system to stimulate the dimensions of behavior in which we are interested. On this basis we would then accept the program for our system as a theory of the structure of events represented by that behavior (cf. Miller et al., 1960). Or, in the case of Walter's work, we might attempt to link an appropriate system of electronic circuitry directly to a natural system in order to obtain an objective analogue of processes which otherwise must be investigated indirectly by a system of second, or third, or higher order inference In this way, a description of the analogue becomes our theory of the event structure characterizing the original system to which we have no direct access.

Any more comprehensive exploration and estimate of the true value and limitations of these strategies specifically with regard to their relevance as explanatory models of the process of individual choice behavior would, in our view, require further discussion of at least three issues: the first is raised by Kurt Gödel's demonstration that for ordinary arithmetic viewed as a formal system there will always be true propositions expressible in terms of that system which, however, cannot be proved from the axioms of the system (cf. Nagel and Newman,1958).

Gödel's demonstration suggests that there is an inherent limitation to the formal or axiomatic method as a means of demonstrating the internal consistency of any array of true statements. In other words, "The resources of the human intellect have not been, and cannot be, fully formalized...new principles of demonstration forever await invention and discovery." (Nagel and Newman, 1958, p. 36)

In the second place, there is considerable evidence to support the notion that formal criteria of logico-mathematical validity have little in common with the modes of verification with which creative innovations are most familiar. Many mathematicians, for example, would seem to contend that the true basis of mathematical demonstration (as well as the personal basis of mathematical discovery) is to an important extent a matter of personal intuition--that it remains more a matter of highly individualized and tacit sensibilities of aesthetic ordering and heuristic potential than an issue of formal proof and collaborative confirmation (c.f. Poincare, 1952; Polanyi, 1958).

Third, were we to assume that the structure of, say, individual processes is essentially congruent with the structure of some formal system or model available to us, we should still have to resolve the difficult issue of providing appropriate criteria by which to "translate" or move from the one universe of discourse to the other. In other words, primary appeal to a "model" serves to compound the issues with which we must eventually deal. For to advocate its use we must not only substantiate the consistency of our model or deductive system but, at the same time, specify the rules of translation or transformation by means of which we move from the specific attributes of our model to their respective behavioral analogues. In fact, we might say that we have compounded the issues several times over, for, in order to argue for the legitimacy of our rules of transformation, we must somehow be in a position to specify by means of an independently valid procedure those attributes of behavior to which the "components" of our model apply.

The Forms of Language and the Forms of Life in the Conduct of Inquiry: Models, Metaphors, and Analogues

"Hard-headed" advocates of scientific empiricism invoke (however implicitly) a system of hypothetical constructs regarding not merely the nature of knowing and the nature of that which can be known, but, in addition, the nature of the link between that which is known and our processes of knowing. On the one hand, there is intrinsic in these arguments the assumption that an act of knowing is valid insofar as it can be reduced to an inductive series consisting of discrete bits of information or data. Here each "fact" is an irreducible atom of epistemological reality and all more highly organized acts of knowing represent combinations of such stable, primary bits. From this point of view the nature of the compound, the glue which binds such atomistic facts into a stable universe of knowns and knowings is analagous to the system of mechanical properties assumed to characterize the Newtonian physical universe. (Locke, Hume, Mill, 1739)

> "I work, not as a theorist, but as an empiricist. As an empiricist, however, I feel the need to organize facts, to see what they add up to, and to be guided in planning my further work by the perspective thus gained. This, I have found to my surprise, makes me, in the true sense of the term, a theorist. For theory, so I am informed by theoretical theorists, is nothing more than the attempt to explain the relationships between sets of facts..." (c.f. Super, 1959)

One further assumption required for the consistent application of such a perspective is that knowledge is entirely objective, that it consists of a number of isolated acts of observation each act of which is dynamically external to the system observed. Here neither "knower" nor "known" is directly influenced by the act of "knowing" itself. Within such an epistemological democracy where each act of valid knowing is reducable to a set of individual and independent atomistic facts, and with rights of assembly and combination after the manner of pushes and pulls entirely external either to the nature of the atoms themselves or to the act of their combination, all facts and acts are equal, each has one vote, and the ultimate criterion is to the generalized assembly: those chains of communal anticipation which can be replicated under the average expectable environmental conditions of "dynamically isolated" observation, manipulation, and system duration.

Any coherent mode of thought represents an historical congruence of metaphysical, epistemological and ideological commitments, though it is not generally regarded by those who live within it as but one of an array of potentially viable strategies for rendering the world of experience and action internally consistent and externally relevant. Our "strategies" for such coherent relevance are, during their time of ascendance, recognized simply as "the way things really are" (c.f. Whitehead, 1925). Such remains the case so long as the available individual and/or communal resources for conceptualization and communication do not readily admit of issues which are at the same time both intelligible and fundamental so long, that is, as we do not encounter issues which tend to question the coherence or relevance of the mode of thought or adaptation itself. For very good reasons, we have rather special limits and conditions of experience within which any relatively coherent system of thought or style of knowing can be recognized as an integrated array of operational or probabilistic strategies appropriate to but a limited range of issues (Kuhn, 1962).

The current explorations of human purposing and the patterning of personal career development appear, in this regard, however to be at one with the more general tendencies of an apparently unusual historical moment. For within our more focal area of concern, as in the larger historical and ideological perspective, we have become increasingly prone to regard any specific perspective, however useful, as one providing but a limited range of fruitfulness. In both the general and the specific, we concede that within any system of action there must remain potentially important human occurances which can be possessed only by altering our perspective regarding what is presumed to be relevant. We are inclined, furthermore, to consider as a crucial conceptual and tactical assumption the notion that the most crucial range of phenomena with respect to those systems of action and knowing which comprise appropriate subjects of concern for the behavioral sciences cannot be understood at all without a personal act of transaction which presumes an alteration of both observer and observed.

Inevitably, we run the risk of being misled by our models and languages of science in two ways: either they do not tell us enough or they tell us too much. Either they lead us to ignore relevant dimensions of meaning and events, or they lead us to infer aspects of meaning or occurrence which are irrelevant to our purposes.

For all models or theories are literal in the sense that, while the assumptions which guide our inquiry (as well as the commitments which lead us to inquire) are only approximate with respect to the resources of any systematic method of inquiry, that fact (or recognition) is not part of the theory or method which we use (Miller, 1964). It can only reside in our capacity to see not entirely with but through our models and strategies. While the literalness of any research strategy can be a resource for clarifying the implications of a theory to which its use commits us, we must also have recourse to levels of figurative and approximate discourse, to dimensions of the linguistic penumbra, which may suggest or lead us toward alternative perspectives. Rough analogies and figurative descriptions, while they can be incisively criticized on the basis of any analytical strategy confined to explicit principles, represent the only means for expressing those dimensions of our insight which lead us beyond the limitations of any particular strategy. Inference from analogy would thus appear to be a major resource for going beyond the structure of information to which our more elaborate strategies commit us. Analogies must be found, they must be discovered. Which is to say they represent a dimension of risk implicit to the scientific enterprise. One might say they represent the dimension of scientific inquiry which renders it truly speculative and exploratory. Analogues must be tested, of course. But our point is that this comes later; first they must be found, and the logic of discovery is in a very fundamental way distinct from the logic of verification or elaboration (Kaplan, 1964). Seeing a situation in a new way, looking at it with a new perspective, is the first step. And first steps are at best approximate, tentative, and exploratory.

Thus we are, in conclusion, led on by not one but at least a pair and perhaps a never ending array of puzzles. There are, first of all, those puzzles with respect to the discontinuous and emergent patterns of approximate strategies which appear to characterize purposeful behavior and which represent the general subject of our discussion. In addition, there are analogous puzzles with respect to the evolving pattern of strategies by which we would explore purposeful behavior. And then, of course, there are those puzzles with respect to the discontinuities which characterize the relationship between the insight which serves to guide our strategies of inquiry and our own articulate resources for formulating them in the logic of verification or replication.

Conclusion: Scientific Revolutions, Personal Transformations, and Human Knowledge

In conclusion we shall offer a few general remarks and observations regarding three major postulates which we hold to be implicit in our entire discussion. First of all, we shall attempt to make explicit those aspects of our discussions which lead us to view scientific inquiry, in both its pure and applied forms, as one of the several arts--as one of a number of collaborative modes of informed human artifice implicit in any enduring pattern of communal activity. Second, we shall attempt to outline our basis for viewing philosophic inquiry as a generalized mode of practical criticism with regard to all such enduring patterns of cultural artifice. We shall, that is, discuss doing philosophy as a generalized style of reflective experience which manifests as its central concern the examination of those processes of human choice, commitment, and transformation by means of which our several orders of individual and collaborative artifice may be integrated as a balanced pattern of life. Third, we shall attempt to make explicit those inferences drawn from our general discussion which lead us to view education (as both a style of personal, reflective inquiry and as an institutionalized array of efforts to cultivate that style of inquiry) to be essentially coterminous with such a generalized mode of practical criticism.

Kuhn (1962) suggests that the history of science represents a series of revolutions each of which alters the very historical perspective of the community that experiences it. He argues that, contrary to textbook formulations and widespread opinion, the history of science is not primarily incremental but is instead more accurately viewed as a process through which the reconstruction of prior theory and the re-evaluation of prior fact reflect major discontinuities of intellectual commitment and discourse. According to Kuhn, the choice between scientific paradigms (the choice between accepted patterns of scientific procedure)--like the choice between competing political institutions--proves to be a choice between incompatible modes of community life.

> If there were but one set of scientific problems, one world within which to work on them, and one set of standards for their solution, paradigm competition might be settled more or less routinely by some process like counting the number of problems solved by each. But, in fact, these conditions are never met completely. The proponents of competing paradigms are always at least slightly at cross-purposes.

> Neither side will grant all the non-empirical assumptions that the other needs in order to make its case...they are bound partly to talk through each other. Though each may hope to convert the other to his way of seeing his science and its problems, neither may hope to prove his case. (*ibid*, pp. 146-7)

Among the points which Kuhn develops in his study of scientific revolutions are several which appear to be especially significant with regard to our immediate discussion:

1. The categorical distinction between fact and theory is relevant only to science practiced within a given paradigm of scientific inquiry and is irrelevant to the processes by means of which new orders of inquiry emerge within scientific discourse.

2. Indeed, the categorical distinction between fact and theory is only approximate even with respect to a single paradigm since no such paradigm or set of procedures can fully be interpreted or rationalized but instead consists of a particular order of professional capacity implicit to a specific array of technical skills.

3. Such "self-maintaining" perspectives required for what Kuhn calls normal or housekeeping (puzzle-solving) science cannot be extended with respect to the wider range of possible orientations by means of internal procedures at all but require "a transition between incommensurables...which cannot be made a step at a time."

4. Because the decision between alternative ways of practicing science rests primarily upon intuitive promise, significant scientific advance requires the capacity to live "interstitially"--requires, that is, the capacity to live between two worlds of inquiry and discourse. It requires the capacity to thrive upon what Kuhn terms the "essential tension" (1959): a commitment to speculations which run

the risk of being wrong, perhaps even wrong-headed.

5. Finally, it is primarily during the process of elaboration which characterizes normal, "housekeeping" research that scientific inquiry appears to represent a cumulative enterprise. It is only within such a self-perpetuating structure that progress appears insured by the implementation of known procedures. Conversely, the sense of progress appears to be rendered most problematical at precisely those choice points in the history of science which mark its revolutionary turns, at precisely those periods during which a new paradigm emerges.

Kuhn's discussion offers, we believe, a compelling argument to the effect that the history of science reflects a process analogous in structure to the very perspective which we would urge regarding purposeful action and entrepreneurial behavior. Indeed we are encouraged by what appears to be the increasing number and power of statements which support this general angle of vision. Thus, for example, Polanyi (1958) emphasizes the importance of what he terms our "subsidiary" modes of awareness and those "tacit" forms of knowing and commitment which provide the context of our various paradigms of scientific inquiry and demonstration. Like Kuhn, Polanyi argues that the nature and justification of scientific knowledge presumes a particular style of performance by means of skills which cannot entirely be formulated. He speaks, rather, of the "fiduciary program" manifested by any act of personal knowledge, the continuities of personal commitment by means of which we "integrate some things subsidiarily to the center of our focal attention" (op. cit., p. 61).

This view, argued in such compelling fashion by both Polanyi and Kuhn, which indicates the structure of scientific inquiry to consist of general paradigms, or established procedures for framing and conducting investigation--paradigms of procedure which, however, defy explicit formulation and, instead, reflect styles of performance and skill presuming a much broader context of tacit commitment and subsidiary awareness--this view represents, in our opinion, an insight of crucial importance to our entire discussion. In our view, the relationship between the articulate and the tacit, between the formal and the subsidiary, between the paradigmatic and the creatively revolutionary, manifest in any human act represents a major consideration which we anticipate to become the primary focus of subsequent exploration in purposeful action and entrepreneurial behavior.

At the same time that we are encouraged by recent studies such as Kuhn's and Polanyi's--encouraged particularly by the possibility that they may persuade others to enlist with us in the effort to explore further their implications--we recognize that these statements are similar in nature to many which have preceded them, statements which, however, have apparently received inadequate consideration. Thus, for example, we recall Whitehead's earlier comments to the effect that "Both in science and in logic you have only to develop your argument sufficiently, and sooner or later you are bound to arrive at a contradiction, either internally within the argument, or externally in its reference to fact" (Whitehead, 1938, p. 14). Forty years ago, in an effort to integrate the implications of modern mathematics, modern logic, and their application to the physical sciences, Whitehead was led to speak of "the organic event as the unit of things real" and, in fact, suggested that "a further stage of provisional realism is required in which the scientific structure is cast and founded upon the ultimate concept of organism"(1925, p. 93). He suggested then that "the organic starting point is from the analysis of process as the realization of events disposed in an interlocking community" (*ibid*., p. 219).*

We recall, also, Dewey's earlier quest for a general description of the "processes through which one type of functional situation and attitude in experience passes out of and into another...the technological or utilitarian...into the aesthetic, the aesthetic into the religious, the religious into the scientific, and this into the socio-ethical..."(Dewey, 1916, pp. 97-8). In fact, a good deal of our argument sounds very much like John Dewey. Thus, we support the general notion that the process of inquiry is best characterized as a series of approximations motivated by the need to more adequately structure any situation which is experienced as vague, as undifferentiated. Further, we agree that, within such an initial undifferentiated state, both means and ends are problematical; that resolution, once attained, is characterized by a new coordination of attributes, a new coordination of antecedent instrumentalities and consequent consummations--an integration at a higher level of control and with a greater degree of flexibility and capacity for adaptation. Like Dewey, we would suggest that the implications of such a point of view are that a natural history of the various attitudes and structures through which experience passes becomes

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*As Whitehead has observed, "Either there is something about the immediate occasion which affords knowledge of the past and the future, or we are reduced to utter skepticism as to (both) memory and induction," (Whitehead, 1925, p. 64). And yet, as Whitehead continues, "all we can ask of the present occasion is that it shall determine a particular community of occasions which are in some respect mutually qualified by reason of their inclusion within the same community," (*ibid*., p. 65).

the indispensible substance of logical analysis, that logical theory amounts to an account of the generating conditions of reflective experience.

We agree (with both Dewey and William James) that experience is a "double-barrelled" word, that it "recognizes in its primary integrity no division between act and material, between subject and object,but contains them both in an unanalyzed totality." We agree that the clear and the distinct is no more real nor more important than the vague and the obscure dimensions of experience generally ignored or otherwise explained away by logical theory and philosphical systems. We agree that the possible is no less real than the manifest, the precarious no less a part of nature or experience than the stable. We conclude, in other words, that Heraclitus is no more (and no less) accurate a guide than Parminides. Indeed, "the union of the hazardous and the stable, of the incomplete and the recurrent, is the condition of all experienced satisfaction as truly as of our predicaments and problems" (Dewey, 1925, p. 54). Those traits of thinking which include uncertainty, ambiguity, alternatives, search, and tentative selection are as real as the "validated" or more clear and distinct objects of knowledge.

Our general argument implies that every experienced event can be differentiated with respect to two foci of potential orientation. On the one hand there is that perspective which makes explicit what Dewey referred to as "the sequential bonds of nature." This is the point of view which provides the basis of the various strategies and paradigms which represent our explicit techniques of science, art, and technology. This is the perspective which provides for "the regulation of ongoing and incomplete processes in behalf of selected consequences." On the other hand, there is the point of view which Dewey referred to as "the dimension of events experienced as consummatory," the dimension of events known to be ineffable and immediate. We agree with Dewey in his contention that it is the intrinsic "aesthetic" dimension of such immediacy which "binds the constituents of that occasion into an integrated whole." This is the dimension which provides the immediate awareness of ends as both implicitly present in experience and as the tacit ground of those goals toward which the articulation of experience is fashioned. In our view--as in Dewey's--the "aesthetic dimension" represents both the context and the culmination of the human capacity to "have an experience" (cf. Dewey, 1934). Furthermore, we agree that a complete elaboration of the cultivation of the artistic would provide a description of the processes through which "one type of functional situation and attitude in experience passes out of and into another..."

The further implications of major congruence between our position and that represented by Dewey's is that philosophy becomes a continuing process of experimentation directed consciously toward the purpose of enhancing the human capacity for the consummatory. Thus, while knowledge and science are both products of art, philosophy is more properly viewed as a general mode of practical criticism with respect to such specific modes of art. Philosophical inquiry is, thus, properly directed toward a theory of consummatory experience; it is, in other words, most appropriately construed as a continuing discourse regarding the grounds of experience appropriate to the full elaboration of human values. If, from the standpoint of articulate knowledge and the several sciences, objects must be distinct and separate, then the role of such a generalized mode of practical criticism is, "to retain an abiding sense of the dark and abounding twilight" which represents the context of creativity and self-renewal, of purposeful action and entrepreneurial behavior.

Each of our several modes of internally consistent exploration and experience are acts of human choice in the sense that the full range of exploration and of human experience admits of additional alternatives. And, yet, those alternatives cannot be "explicated" by adopting solely the language of any particular mode of artifice--they cannot be stated from within any specific paradigm--for each "self-maintaining" mode is discontinuous with respect to its alternatives. Solely with respect to any single mode, what can be said is either self-evident, elaboration, specification, rationalization, or it is unintelligible and, thus, meaningless. For this reason, we might conclude perhaps that the nature of philosophy as a generalized mode of practical criticism with respect to the full range of experience must remain implicit to the quest for the examined life, must remain, that is, implicit to the various acts of engagement which commit one to a wide variety of human transactions. From this point of view one might conclude discussion by advocating an essentially phenomenological approach to behavior. To some extent, certainly, the personal experience of anxiety, fear, or even dread in the face of "non-being" and the corresponding feeling that one wills his own sense of reality by virtue of what Tillich calls the "courage to be"--all this appears consistent with the perspective we urge. Certainly we share with those who advocate an existential perspective strong reservations with respect to any "explanatory" approach to behavior, and emphasize, instead, the limitations and discontinuities inherent in any logically contingent description of the sequential ordering of phenomena. Despite these areas of agreement with current phenomenological and existential thought, however, we seek some more mediating contextual perspective if only to acknowledge the inevitability of a continuing dialogue concerning the issues involved.

Such a perspective regarding the reciprocal relationship between contexts of exploration and those of explanation appears to be entirely consistent with the more general notion of veritas as implying not merely that which we accept as valid by virtue of our having explicitly tested its objective reliability through some procedure of public confirmation, but rather, that which we find to be trustworthy--that is, worthy of our trust--or, indeed, that which we come to acknowledge as the substance of our trust--within the total context of our human engagements (cf. Erikson, 1964). It is from this point of view that we emphasize the intimate relationships that exist between language and thought, between reason and conduct, and, finally, between creativity and career (cf. Hampshire, 1960; Aiken, 1963). We perceive that to "authenticate," to establish the truth of, to acknowledge that to which we have committed our trust, is thus to confirm our personal sense of human value and purpose. Finally, we hold that the intimate relationship between veritas and axios as reciprocal dimensions of human engagement engender the creative context of both personal commitment and communally acknowledged career pattern.

EPILOGUE

(Perspective by Incongruity)

If, as Stephen Pepper (1942) suggests, all philosophical positions reduce ultimately to "root metaphors," then the roots of our own metaphorical sense of personal career and human action would, we suggest, be essentially "dramatistic." The mediating principle which we would invoke is that which Kenneth Burke (1954) and Scott Buchanan (1929) suggest: a "perspective by incongruity." We would frame a stage upon which the various languages of our symbolic acts and histories might attain a communal as well as a behavioral confrontation. We would anticipate that a more general "poetics" of career development should provide fruitful strategies for mediating dimensions of work and play, science and art, education and philosophy, which now escape our proper attention.

Upon such a stage we might, for example, adopt Thoreau's strategy of ironic commentary upon a less than fully human expression of vocation by translating essentially poetic concerns into the prevailing "economic" idiom. On the other hand, we might seek to "encompass" the immediate currency of our more psychological metaphors by translating them back into their original dramatistic and "tragic" mode in order to confront them with appropriate "comic" alternatives.*

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*Greek tradition required that the festival of drama which had as its thematic core the serious action embodied in the tragic trilogy have as its conclusion the satyr play. Plato's symposium ends with daybreak, the cocks crowing and all others asleep or gone except Agathon, Aristophanes, and Socrates, who, still awake and drinking in turn out of a large bowl, agree that the qualities requisite for writing tragedy and comedy are the same. Thus it seems only appropriate that this exploration of the role which symbolic processes of ego synthesis play in the patterns of human action and career development close with a brief satyr play of its own.

Through such a dramatistic view we might perhaps recognize our present concerns for pattern in career development to be but a particular expression of a similarly "tragic" mode of experience. For, like the original tragic hero, the paragon of our immediate educational and scientific concerns is characteristically one who "prepares, controls, wills, or otherwise interprets events to the end that they become manifest with a central idea or hypothesis. The direction of expansion is, thus, one of progressive integration and generality" (cf. Buchanan, 1929, p. 149). The grave consistency with which we fashion this concern renders it the model of our traditional economic, scientific, and moral insight. A "comic" mode, on the other hand, would entail a process manifesting a wide variety and substitution of heterogenous involvements. At every turn in the action a discontinuity would be confronted, an inconsistency discovered, a plan abandoned or frustrated, a fact or theory caught in duplicity. Clowns, kings, children and others somewhat displaced in the general ferment of vocation would become central figures of characterization.

The figure of the play becomes thus precisely the strategy for illuminating our presumptions regarding work, science, and the full-funding of human experience. The play is the thing. Indeed, play _is_ the thing. The play on words. The poetics of human engagement and symbolic action. Unfortunately, perhaps, we suggest a wider perspective regarding the genres of exploration while neither work nor science represent traditions with which one trifles lightly. And yet, critical philosophy as a comedy of ideas, as the intellectualization of all modes of human artifice provides not only the footnotes to our liberal sense of vocation but the headnotes as well. We do indeed approach the world symbol-wize and symbol-foolish. And the symbolic dimensions of human artifice provide whatever measure of freedom informs our condition.

SECTION V: PROFESSIONAL IMPLICATIONS

Overview

The three Chapters of Tiedeman's which comprise this final section consist of representative efforts to trace the specific professional implications stemming from his current theoretical work. Each of the three Chapters traces those implications within a particular realm of professional responsibility. The first deals specifically with current themes and issues in vocational-technical education and their relation to occupational guidance. The second considers the role and responsibilities of school counselors within a broadened concept of liberation through education. The third paper traces the general implications of Tiedeman's position for the professional organization and engagement of counseling psychologists.

The consistency of viewpoint throughout these statements is, of course, provided by Tiedeman's general conception of purposeful behavior and action. It is this perspective which entails his particular emphasis upon the processes of personal discrimination among alternatives and the crystallization of personally determined choice patterns. A second and increasingly important theme which bears specific commentary is that of an increased regard for the context of "subsidiary" personal knowledge which serves tacitly to inform our more focal, explicit processes of personal choice. Throughout the earlier chapters of this book Tiedeman has commented directly on the development of his ideas concerning the "tacit" dimensions of knowing and doing. In this connection he has spoken explicitly of his increasing regard for such concepts as Polanyi's (1958) "personal knowledge" and Kubie's (1958) "preconscious mental processes". Other equally significant formulations which have even more recently received detailed consideration include Neisser's (1963) ideas regarding "multiple modes of thinking" and Koestler's (1964) concept of "bisociation" as the key to human creativity. In the papers of this chapter, however, we see this emerging regard for processes of imaginative reorganization manifest in another significant way.

Each of the papers was originally presented as an address to a professional audience. In preparing the papers for publication in this present form, we have attempted to preserve something which is more than a mere rhetorical strategy appropriate primarily to a public address. We refer here to a style of address in which Tiedeman invites the attention of an audience to the subject of his interests by a procedure of directly engaging them in the central processes of predicament, quest and re-orientation which those interests require. Thus, the three statements which comprise this concluding chapter do not merely report on findings or conclusions. Neither do they simply represent extended editorials on professional ideology and policy. Instead, they directly embody occasions in which Tiedeman has invited others to engage with him in a process of thinking, through speaking or listening. We trust that in preparing these statements for publication we have preserved a similar opportunity for the reader.

CHAPTER 16

VOCATIONAL-TECHNICAL EDUCATION AND OCCUPATIONAL GUIDANCE*

Overview

The order in which the three chapters of this section have been arranged is designed to provide a sequence of development from more specific concerns of professional practice, through the general context of educational purpose within which such practices exist, to, finally, a general point of view adopted by a professional organization presumably concerned with those issues and their educational context.

With this first paper, dealing with vocational-technical education and occupational guidance, Tiedeman first presents the decisions of principle which, in his view, underlie effective organization for vocational-technical education: decisions of area, time, and curriculum. Second, he portrays a client system of vocational-technical education, based upon his theory of career development and the concept of "will-to-purposeful-action". Third, and finally, he sets forth a structure of school organization consistent with his principles for the encouragement of the "will-to-purposeful-action" within vocational-technical education. Here he gives explicit consideration to the organization of a guidance service consistent with that program of education.

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*This chapter is part of a chapter by David V. Tiedeman published as "Vocational-Technical Education and Occupational Guidance", in Zeil, H.R., Education and Productive Society. Toronto: W.J.Gage, Limited, 1965, pp.124-174.

The concept of "supervised practice" emphasized in this discussion is one which might indeed be anticipated as characteristically appropriate to a discussion which focuses specifically upon principles and practices of "vocational-technical training." To miss the full generality of this concept, however, would be to neglect both the background of theory from which it emerges and the full range of its implications for educational structure and professional practice. As a concept receiving particular emphasis in the immediate discussion, but, at the same time, one framed within the total context of this collection of papers, it bears direct affinities to the pragmatic-contextual notion that knowledge pertains first of all to activities - that it is, indeed, primarily an intransitive verb, in the sense that it engenders an infinite range of possible objects, direct and indirect. This conception of "supervised practice" suggests, furthermore, the notion that personal knowledge as an activity of independence within a communal commitment consists of a process of reciprocal illumination between, on the one hand, patterns of articulate, focal concern and, on the other, implicit, subsidiary confirmations.

It is through such implications that the notion of supervised practice, while perhaps most immediately significant within the particular context of vocational-technical education, represents a general resource of conceptualization for more effectively viewing the total structure of educational commitment and professional practice.

Purpose and Plan

Our task today* is to bring the concept of occupational guidance nto focus in relation to vocational-technical education. The theory of areer development underlies the program of occupational guidance. Thereore, my strategy in this paper shall be to emphasize certain decisions of rinciple upon which the organization of vocational-technical education has een and must be founded.

I** divide my remarks on vocational education and occupational uidance into three major sections. I first present the decisions of principle hich underlie organization for vocational-technical education. In that first ection I discuss both the structure of vocational-technical education and the rinciples giving rise to decisions on a) area, b) time and timing, and c) curiculum and procedure. The second section portrays the client system of vocaional-technical education. In that section I use the theory of career developent to comment both on the recruitment of clients into vocational-technical ducation and the education of those clients given both their characteristics nd the expectation that education develops the "will-to-purposeful-action". he third and final section sets forth school organization designed for encouragement of the "will-to-purposeful-action" within vocational-technical education. In that section I give explicit consideration to the organization of a guidance service in vocational-technical education. You will find that I sprinkle the two earlier sections with opinions which substantiate my belief that a guidance service must exist in a vocational-technical school when the "will-to-purposeful-action" is a goal of the school and when there is concern that the student alone, not his parents or his school, shall be responsible for goals stemming from his will.

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*From: Lecture, Conference on Education and Productive Society, Department of Industrial and Vocational Education, Faculty of Education, University of Alberta, Edmonton, June 1963.

**Since this is Tiedeman speaking, we leave the personal pronoun. However, it should be understood that the beliefs in this paper are also shared by Dudley.

Decisions of Principle:
The Structure of Vocational-Technical Education

Vocational-technical education exists in a general system of education. The distinctive duties of the faculty of a vocational-technical school (as well as of a professional school) are to induct students into a craft.

The faculty of a vocational school brings its students into direct relationship with the purposes, materials, and obligations of a craft. The passage into the responsibilities of the craft is sometimes partitioned so that there are periods: 1) of instruction about the materials and obligations of the craft; and 2) of observation and preliminary work of a related kind. However, the incontrovertible mark of the vocational instructor is his supervision of students as they practice the craft.

The course instructor through lecture, teaching, and assignment brings the students into transaction primarily with ideas. The supervisor in vocational education, on the other hand, brings students into primary transaction with ideas, materials, and people. The vocational student operates with ideas, things, and people to create a product which has value to himself, his supervisor, and others.

Because of this difference in aim between instruction and supervision, teaching through supervision differs from teaching through lecture as follows:

(1) Both thought and action are subjects in supervision. Students generally do not act during lecture and many may not act even after a lecture.

(2) Students assume responsibility for action during the course of supervision; responsibility for construction of an essay is all that can be offered by a lecturer.

(3) The principle procedures in supervision are review, criticism, and planning. Plans increase the likelihood that alternatives elected during opportunities for choice in action will be the more efficient alternatives. Lecturing, on the other hand, represents a broadcasting. When the lecture is planned for a specific audience, the broadcast may well strike the personal interests of a majority of the audience, but the final product is a broadcast nonetheless.

(4) The principle products of supervision are confidence and competence; those of lecture are information and the expectation of power in action.

Organization for Vocational-Technical Education. The decisions of principle which determine conditions for organization in vocational-technical education stem from the election of 1) area, 2) time and timing, and 3) curriculum and procedure. We must understand all these issues if we are to find the place for occupational guidance in a vocational-technical school.

Area. The apprenticeship offered in a school distinguishes vocational and professional education from general education. However, what jobs require an apprenticeship?

I am inclined to believe that every job and every new worker benefits from an apprenticeship and have delineated the step of induction in my paradigm of the differentiation and integration which accompanies the initiation of intentional activity. There is much that the new worrker must learn in any novel job situation -- information, patterns of demand, patterns of reward, pace -- and the like. The new worker weathers induction by many devices --learning by himself, getting help from colleagues, being supervised, and undertaking an apprenticeship either on the job or in a vocational or professional school.

Although an apprenticeship may be advantageous in every instance, apprentice training through vocational education becomes availble for only some areas of work. The seriousness of error on the job, the amount of practice deemed necessary, and the demand for apprentices all figure in the decision to provide vocational education of a particular kind. Vocational education now seems to become available for those areas of a craft in which:

(1) an apprenticeship of at least six months is deemed necessary for entry into at least a journeyman's responsibility in the craft;

(2) there is a regional market for the apprentices; and

(3) the companies constituting the market do not individually wish to provide the apprenticeship but cooperate to the extent of occasionally taking a vocational student into apprenticeship in collaboration with a supervisor of the school.

The fact that vocational education is a collaborative endeavor of school and company restrains both the organization of the school and the program of guidance the school must support. The supervisors of a vocational area in the school are committed to the craft into which they induct students. Furthermore, they depend on their ability to meet the need for their craft in the region serviced. Finally, these supervisors are ordinarily obligated, at least morally, to supply journeymen for the companies in their region. This commitment of the supervisor offers the salutory effects of 1) offering students a means of increasing their likelihood of securing employment, 2) providing a model of a master in the craft to whom they may apprentice themselves, and 3) inducting students into the craft so that they begin work with competence and confidence sufficient to sustain their belief in the general social order as they search out personal advantage within a segment of the social system.

The provision of a path and the institutionalization of means to begin upon that path provide ego support for youth and detached workers which is sorely needed. I commend those of you who provide that support. Continue to prove worthy of that considerable contribution to the mental health of the students you serve. However, pause with me now and delineate the limits of your possibilities and responsibilities as a supervisor of students.

The supervisor of vocational education is necessarily committed to his craft. He has his goal and his basis for wanting that goal. However, the student of the supervisor must develop his own goal and his own basis for wanting it. Otherwise, a student will later act automatically; he will not have assumed responsibility for choosing and pursuing his own path in life. The student must be given opportunity to choose; furthermore he must be held accountable for his actions in the pursuit of his elected alternative; finally, the student must have opportunity to give up and start afresh if he begins to discover that the demands for action and belief required in his supervisor's craft are incompatible with what he presently either accepts and/or wants. The responsibility for supervision of judgments of this nature must rest with the counselor. The counselor must see to it that the student "lends his own meaning" (Frankl, 1959) to the opportunities for choice inherent in the performance of the elected craft. In order to accomplish this aim, the student needs the help of the counselor who is neutral but not unsympathetic to the premises of the supervisor's craft, but is committed to the premises of his own craft -- namely, to see that each pupil has adequate opportunity and help in finding meaning in life.

If the vocational school would espouse responsibility for the cultivation of this will to meaning, I suspect that some of the frequently expressed misunderstandings between vocational and so-called liberal education could be dissolved. The advocate of liberal education fights for individual responsiblity in the selection and substantiation of life goals. Vocational education necessarily inducts students into a craft which then limits their alternatives. The challenges to those in vocational education are:

1) to induct students as they do because life involves the passage into successively more narrow restraints which make the receipt and processing of information manageable by the individual; but 2) to do so without removing responsibility for the choice from the student during his study. The program of guidance should be given the authority, opportunity, and resource necessary for supervision of the student's responsibility for choosing as he passes into the restraints of work from those of study.

The choice of area for vocational education rests in political action as noted. This fact frequently creates tension in the organization of a vocational school. The vocational character of the region in which a vocational school has been located can change markedly and with great rapidity. The areas of supervision offered in the vocational school ought to be altered to accommodate, and even sometimes to anticipate, such changes.

However, the areas of supervision of a vocational or professional school are limited by its faculty and the tenure of that faculty. In order to meet the obligation to change within the bounds of staff, we must find means of creating greater flexibility in the areas provided for the supervision of youth. All possibilities for increased flexibility require extra funds which can be used in contingent ways. Furthermore, vocational schools must reorganize so that the skills of the faculty are in accord with the times. The reorganization can be accomplished through 1) re-direction of hiring policy as vacancies occur, 2) re-education of existing members of the faculty, and/or 3) redefinition of the task of supervision of faculty. Perhaps the permanent faculty of a vocational school should offer general supervision of all apprentices regardless of craft. The school would then need a fluctuating cadre of employees in nearby industries to whom students could be apprenticed for supervision on a job. The job supervisors would then work under direction of a permanent superviors in the school, who would subsequently operate almost as a counselor of the student. However, the permanent supervisor in such a role would emphasize role assimilation (Mosher, 1964) by the student, an emphasis not perpetually dictated by the problems met in counseling.

Time and Timing. The second major category of decisions in the organization of vocational-technical education concerns time. How long should vocational education be provided? How often should vocational education of various lengths be offered to a citizen? In what sequence of life problems should vocational education be offered to citizens?

I raise these questions of duration, frequency, and sequence of vocational education to emphasize that we are blind to need and to possibility when we provide but one opportunity for vocational education to a citizen and that one chance only during his adolescence. The time and timing of vocational education obviously hinges upon the technical area and the clientele for the available training. Technical areas requiring complex general foundations will obviously be offered later in the life and will take a longer period of vocational education. Business, design, divinity, education, law, and medicine exemplify areas in which vocational education comes later in life and lasts longer. Typing and machine operation are offered earlier in life and require shorter periods of apprenticeship.

I shall say more about the clientele of vocational education in a later section. Here I merely note that youth who receive their vocational education early in life and for only a short time are definitely handicapped in their exposure to socialization in an educational frame. Compare the opportunity for socialization available to the university student with that provided for the vocational student. The university student ordinarily has three to six more years of socialization through education than does his vocationally educated brother. This condition poses a paradox since the university student frequently also holds the edge in his capacity to deal with social crises through rational means.

Danger lurks in comparison of the extent of socialization for university and vocational students. I do not want to force vocational students to continue school at a time when they are sick of school. Students must escape school at times. However, we should not wash our hands of such people. They have second thoughts; they sometimes experience regret. Most of them need help in changing their skills to accommodate a later market of needed talents. I urge the provision of more educational opportunity for such people. Have no fears concerning the independence of adults who through counseling in educational crises are really helped to assume responsibility for their existence at the same time that they are helped to qualify for new opportunity in their time of duress. Such people are truly independent but even independent people frequently need extra resource from their society. What I fear is our failure to provide enough educational and economic opportunity for people in time of duress. Lack of opportunity and hope breeds mental illness, social unrest, and violence. We must find new ways to bring dignity to man and his seeking of recognition through maintenance of his independence in collaboration with his society. Machines are now placed in many former paths through which this dignity has been found at work. However, the dignity prevails whenever man in his conceptualization of the world remains master of the machine rather than its slave. The supremacy of man over machine must be maintained at any cost.

Curriculum and Procedure. The curriculum in vocational education gains definition in relation to decisions on area, time, timing, and clientele. Decisions about the curriculum presume pathways whereby what is known is assimilated by the clintele with the aid of procedures efficient for qualifying students for work in a particular area.

The main elements in decisions on the curriculum are 1) what is known which must be mastered (content for short) and 2) procedure or process for making the assimilation of knowledge efficient.

In commenting upon content in the vocational curriculum, I necessarily limit myself to general considerations. The specific pathways to preparation are matters for those wise in each area of vocational training to determine. I here point to several conditions which sometimes cause controversy among educators and citizens.

An inventory of required content can sometimes be constructed for an area. If an explicit inventory cannot be constructed, there are at least assumptions about necessary knowledge which exist in the minds of those responsible for determining the curriculum. Sets of needed knowledge are then grouped as courses. Decisions are reached about what can go on simultaneously and what requires simpler understanding before more complex understanding can ensue. Sequences of courses and the program as a whole arise from decisions of this kind.

Decisions about sequences define prerequisites. Prerequisites provide means for inclusion or exclusion of applicants or for the arrangement of courses upon acceptance of an applicant.

Prerequisites determine general education. However, teachers of general courses also define what they teach. For these reasons, officers of a vocational school will be perpetually involved with decisions about general education in their school. What education will be required of all? What part of this education will be provided in the vocational school and what part in an earlier or coordinate school? If vocational education is conceived as a part of secondary education, what about the attainment of goals of education for all citizens which are provided in non-vocational secondary education?

I trust you see in these questions the bases for the disagreements about the advisability of having vocational education as a part of secondary education. Furthermore, I presume you note the origins of problems regarding:

(1) establishing prerequisites;

(2) organizing so-called foundation courses in your curriculum; and

(3) providing remedial work for applicants you want but find deficient in one or a few courses which are needed.

At those times when advocates of vocational-technical training and the defenders of liberal education are at loggerheads, perhaps both might pause and recognize 1) the inability of a student to know it all, 2) the need of some students for learning while doing, and 3) the necessity of deciding even though one is not sure of the right alternative. If only we could tolerate some ambiguity at the same time that we accept the imperative of excellence, perhaps we might then at many times proceed to educate rather than to attack or defend.

Supervised practice in the vocational curriculum requires two distinct procedures. There is a procedure by which the student is inducted into the operations of the craft. There is also a procedure of supervision.

The decisions determining the induction of the student into his craft are conditioned by safety, expense, and availability of physical resources. Such considerations create a pattern in the exposure of the student ordinarily of the sequence:

(1) instruction about materials and operations upon materials;

(2) observation of materials and production procedures;

(3) operation in a part of the productive sequence which is easy, safe, and inexpensive; and

(4) participation in the full process of the craft with regular supervisory sessions which provide review, criticism, planning afresh, and observation of performance under direction of the new plan.

Unfortunately, the procedure of vocational education occasionally includes the first three but not the last of these elements of instruction through action. For instance, practice in teaching sometimes fails to give the student experience as a fully responsible teacher under adequate supervision.

When full responsibility in the practice of a craft is omitted during training, students are denied supervision during their assumption of responsibility for their actions. Such denial constitutes a serious deficiency in vocational and professional education when it occurs. Students are thereby denied opportunity to develop confidence and competence in a favored capacity. We cannot afford to let formal education terminate before liberation of the student has occurred. The risks are that doubt, defense, and despair become the outcomes of vocational education. Such conditions predispose citizens toward personal discomfort, social unrest, and mental illness.

The student and the supervisor become intertwined during the course of the student's practice. The relationship must be sufficiently intense so that the student knows that his competence is being closely assessed. The relationship must be sufficiently objective so that the attention of both parites can remain primarily on the task and, as possible, not on the personality of student or supervisor. It is ridiculous to suppose that the personality of the student is ignored during supervision. Furthermore, it is ridiculous to think that the personality is not modified should supervision prove successful. Nevertheless, the mark of good supervision is to deal with the intentional system of the student so that the student can achieve confidence and competence in a limited range of his activities, not throughout his entire personality.

J. S. Tyhurst, Massimo (1962), and Mosher (1964) offer interesting and effective techniques for accomplishing this aim.

The Client System of Vocational-Technical Education

Opportunities provided through vocational education attract students while studentsrequire accommodation in vocational education. Vocational schools and their clients thus link their fortunes. However, I separate students from opportunity in this section so that I can conceptualize issues in vocational education. In reality, a vocational system of education gets forged through the decisions on areas, time and timing, and curriculum and procedure which have just been discussed as well as those decisions on clients which determine who applies and is retained for graduation.

Occupational Inheritance through Educational Choice. Who are the clients of vocational education? The facts concerning the inheritance of occupation through educational choice provides a first approximation to the desired answer. In other words, we can begin by reviewing the evidence regarding those who *choose not* to tend toward vocational-technical education.

In the United States preliminary social sorting occurs at grades 8 and 9 (Cicourel and Kitsuse, 1963). At this time students choose to prepare themselves for college or not. The choice depends heavily on both the socioeconomic position of the student's family and on the scholastic aptitude of the student. Of course, the socioeconomic position of the family and the scholastic aptitude of the student also influence one another. The interdependence of scholastic aptitude and both the history of the family status and the hopes of family and student confuse the presumably wise view of organizing education for the facilitation of hope. While parents and youth are entitled to hope, a status must be earned to be enjoyed. Therefore, the school must both facilitate striving and demand proven accomplishment in steps to the goal (Tiedeman, in press).

The top 30 per cent of students in the general distribution of scholastic aptitude generally intend to go to college in the United States (Shea, 1954). This statement holds regardless of the socioeconomic position of the family when the family is not definitely opposed to college. There is some slippage, however, should the family remain neutral. When neutrality about college reigns in the family, financial considerations and peer support tend to dictate the college choice of a student.

The bottom 30 per cent of students in the general distribution of scholastic aptitude probably do not ordinarily intend to go to college. However, students whose parents are determined that their children go will be going. Neutrality from the parents usually means that college attendance becomes impossible for students of low scholastic performance.

The college intentions of the middle 70 per cent of the students in the United States generally follow socioeconomic lines. Parents of lower social class do not ordinarily oppose college attendance but they also do not take too definite a stand in many instances. The absence of support from parents plays havoc with the college intentions of youth within this social class. When parents are opposed or neutral about college attendance, teachers, counselors, and peers can facilitate the choice of a college program should they elect to do so.

At present, from 30 to 35 per cent of a generation of youth start college (Flanagan, et al., 1962, p. 2-11). Probably only 10 to 15 per cent of the generation graduate from a four-year college.

Although we know that vocational students come from the non-college group of students, we do not know the origins of vocational school elections. We know that the vocational group is in large measure defined by socioeconomic status of family and by scholastic aptitude of the student because it stems from the non-college group. Within the non-college group, Cass, Kugris, and I (Cass and Tiedeman, 1960, and Kugris and Tiedeman, 1959) have shown that the choice depends to a small degree on more specific aptitudes than scholastic aptitude. However, it is well known that vocational students don't necessarily elect vocational education; some students are placed in the vocational school because it is decided either that it is the only way they can learn or that the vocational school is the only place where their behavior can be contained.

However, vocational training merits existence on grounds other than the incapacity of youth to manage a school or university education. I know that proponents of vocational schools in the United States now attempt to be selective. The level of skill in the vocational graduate has been raised as a result. But this strategy offers little help for the general problems of education in the secondary school. We must work on the problems of education in greater scope than we have been wont to do.

Practice under supervision defines vocational education. Practice under supervision is a superior way to educate when it is time for a person to be inducted into an area of work. Practice under supervision may also be effective as a remedial program. The effectiveness depends, however, on the variety of opportunity offered a student and upon his development of a favored capacity in the course of the practice under supervision. This latter task ordinarily requires a good deal more counseling in cooperation with the supervised practice than is required when the student has a tentative goal and is working to commitment in an area during the step of induction.

The possibilities multiply for programs in secondary education as one explores the noted lines. There are the college bound and the non-college bound. Among the non-college there are the vocationally committed and the vocationally uncommitted. Among the vocationally uncommitted there are those at ease in a general program of study and there are those in need of 1) directed activity for learning, 2) exploratory activities and counseling, and/or 3) psychotherapy. The mentally deficient will also appear among this latter group. Obviously, the mentally deficient need a different program of activity than do some of the others who will constitute groups defined according to my criteria. The spectrum for which secondary education must account obviously broadens and deepens as we follow the distinctions here created. Patterns must be created in education to accommodate all parts of the spectrum. Vocational education deserves a part in the task but should not shoulder all of it.

Vocational Development. Vocational education brings its adolescent students into two discontinuities of vocational relevance. The first discontinuity is that of the vocational program itself. The vocational program forces the student's choice of apprenticeship in a given craft into the aspect of implementation or adjustment. The program constitutes demand or reality for this phase of the student's vocational development. Will the student's career plan stand up and become elaborated or will it be reformulated? Let's tackle that question now.

The student progress is through steps of induction, reformation, and integration with regard to the apprenticeship of an elected craft if the program proves successful. The supervisors of students might well attempt to cultivate these steps. In the first or induction step, the student must be encouraged. During reformation, the student will carry his own interest but challenge the supervisor by being more like the supervisor than the supervisor may care to have him be. When integration is achieved the student is more in command of his own impulses in pursuit of the objectives of his craft and has more freedom to do better at his craft while having excess energy to devote to next or other aspects of choice in life. Supervisors should strive to help a student achieve before graduation this degree of comprehension of living by intentful action but with responsibility to others.

The second vocational discontinuity for the student in the program of vocational education represents the landing of a job upon graduation. The vocational program forces the student into the aspect of anticipation or preoccupation with regard to the job discontinuity of vocational development. I expect that the choice of job will progress through steps of exploration, crystallization, choice, and clarification during the program of vocational study. Vocational development during vocational education can differ from that noted here because job clarification may be expected before entry into the vocational program. Although this policy offers hope that places in the vocational program will not be wasted, the policy puts the vocational program at a disadvantage in opportunity available for ego development through career development if anticipation of preoccupation with job choice is left indeterminate upon entry but placed in a condition of clarification upon departure. Clarification grounded in examined choice represents a condition of great potential both for the student and his future employer.

Should Ginzberg's (1951) theory of occupational choice prove out, we cannot expect great stability in either the choice of apprenticeship or the choice of job on the part of the adolescent. You will recall that Ginzberg hypothesizes that the young are in a period of fantasy with regard to occupational choice just before they leave elementary education and enter into elections of programs for secondary school. The condition of the occupational choice is supposed to have progressed into a period of tentativeness but only the interest and capacity stages are supposed to be complete when the apprenticeship has to be elected. However, O'Hara and I (O'Hara and Tiedeman, 1959) have shown that all aspects of the capacity stage are not then complete. The students at the age of program election in secondary school do not have a very accurate idea of differential capacities although they may well declare in interview, as Ginzberg claims, that they elected their then favored vocation because they are good at it.

Ginzberg's theory casts further doubt upon the advisability of expecting occupational choice to enter into a period of reality during secondary school. Ginzberg expects this kind of behavior with regard to occupational choice of the college student, not of the high school student. I happen to believe that Ginzberg's periods and stages result from the demands on students more than from their developing psychological capabilities (Tiedeman and O'Hara, 1963). However, there is room for doubt here and those who organize vocational education should face that doubt. Should vocational education be offered in early adolescence? Actually, the young demand vocational education so the question is largely academic. Nevertheless, examine the data which Super and Overstreet (1960) have published on the vocational maturity of ninth grade boys in the United States. Do not expect miracles in vocational education offered in the period of early adolescence!

Vocational education is also offered to adults. Such adults may be out of work when they begin study or they may undertake study for a new craft while employed to perform a craft acquired earlier. The unemployed need the new craft more urgently but they may become committed to it on bases which are not as satisfactory as those which form when the imperative of subsistence exists only in anticipation rather than in reality. There are interesting consequences of these observations.

The most obvious observation regarding the vocational education of adults is that the vocational schools will find adult students in a different condition of vocational development than they find adolescent students. All adult students will have had at least one job. Many will have had more than one job. The career pattern of the student becomes important to the vocational education of adults. How has occupational choice fared in the work history? What stage of differentiation and integration did a person reach in the discontinuities of each of the jobs he held? How did the continuities in his career progress with the discontinuities of jobs? Did the continuities become further differentiated and integrated and leave the man master of his work or did discontinuity after discontinuity at work lead to confusion in the cognitive system of the man at work? Such is the road to despair, of course. Vocational schools can benefit when they can plan for the education of adults in terms of their vocational development and when they organize to facilitate ego development through supervision of adults at practice acquiring a new craft.

Vocational education for the unemployed, while necessary for destitute, places education and the worker at a disadvantage. Education is a resource for the differentiation and integration of the cognitive basis for one's position in life. Education must be sought by the student who must consider himself master of his position in life. The forcing of education upon someone creates the danger that the person may not assume full responsibility for either the acquisition of knowledge which might really be necessary or for his actions on a job in which that knowledge will be called into play. In short, people forced into education tend to blame "them" for error rather than to assume responsibility for their own thought and action.

The alternative to providing vocational education for adults only in time of crisis is to provide that education more continuously. However, it is not enough merely to have the education available. Potential clients have to be interested in available possibilities from time to time. Potential clients have to create plans which cause them to embark upon new training while they are still able to support themselves. The placement of newly qualified students in this system also has to be watched with care because those persons are being asked to wager certain income from an old task against indefinite income in a newly preferred task in which they cannot be sure that they will make good. Although the task I have laid out for a new kind of anticipatory education of adults is difficult, let us not lose sight of its advantages. Anticipatory education offers the worker opportunity to be master of his own vocational choice. Anticipatory education also offers means to change demands for skills if plans for change are effected in advance and if companies assume responsibility for seeing that transition in skill is accomplished with dignity and without financial privation.

Socialization through Education. Becker (1963) has pointed out that vocational students lack the opportunity for socialization which is provided for the university student. I alluded to this point in the earlier sub-section on the time and timing of vocational education. Let us return to socialization through education now.

The university provides opportunity for students to live together three or four years in a community separated from society. In college, the student:

1) seeks a place in society in which his favored capacities might find acceptance,
2) further develops favored capacities so that he may enjoy confidence through competence as he takes up work in his elected position,
3) strives for confidence in initiating and justifying intentions of relevance to the cultivation of his favored capacities,
4) learns how to collaborate with superiors and peers, particularly peers of the opposite sex, and to promulgate a marriage, and
5) develops acquaintances among faculty, and peers and their families who aid in the sponsorship of career after college.

Vocational schools undertake responsibilities for socialization in only a limited fashion. The student is not ordinarily isolated from his family. He has already selected his goal and is only prepared to take his place in the plant in which his talents might be needed. Further socialization is considered to be unnecessary. Such is, in fact, far from the case. The clients of the vocational school are probably most in need of the added socializing experiences provided in the university. The vocational student particularly needs instruction and practice in the human relationships required at work. Otherwise, the student may be unable to cope with the demands of new acquaintances on the job. Weakness in such coping mechanisms leaves the student with slight defense and little confidence, and subject to the whims of the bullies and demagogues at work. Socialization is no frill in education. When the moratorium-like experience proves successful, it is the very essence of liberation through education. The student then emerges in command of life rather than a slave to it.

Career in Identity*

The capacity to engage in intentional activity of adequate quality finds its roots in childhood and elementary education. Let us, therefore, look more sharply at elementary and secondary education in general. What influences does organization in those realms have upon the formation of career in identity which is the problem of vocational education?

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*I am indebted to J. S. Tyhurst, a colleague of mine at the Center for Advanced Study in the Behavioral Sciences during 1962-63, for numerous ideas developed in this sub-section. Responsibility for this presentation is of course mine alone.

The vocational school precipitates, and organizes to aid the resolution of a crisis in identity formation in adolescent or adult students. Erikson (1959) suggests that crises of trust, autonomy, initiative, and industry antedate the crisis of identity The resolutions which the person achieves in these crises create a structure which conditions his passage through the transitions inherent in accepting the responsibility for intentional activity at work. The assumption of an attitude of individual responsibility at work presumes a continuity in ego development through elementary education. Let us consider several of the more important elements which facilitate the development of career in identity.

Meaning in "the System." Man "becomes" by moving from one structure to the next. Man himself lends continuity to the discontinuity inherent in the transitions from structure to structure. Man's verve for movement from structure to structure is conditioned by his understanding that his desires can be achieved through the restraints of a new structure. The school contributes in a critical way in giving pupils a sense of belonging to a system in which their desires have a reasonable possibility of achievement. The elementary school thus occupies a critical place in personal development which gears pupils into a system.

Pupils experience the crises of initiative and industry during the period of elementary education. On the one hand, pupils are expected to assume initiative in action; on the other, to devote themselves to goal in ways which are persevering. I consider initiative here: industry is considered in the next sub-section.

Schools socialize children. Schools therefore have responsibility

1) for demonstrating to children what adults wish, 2) for encouraging children to do what adults wish, 3) for encouraging children to pursue what they wish within the restraints which adults place upon striving. Some teachers pursue these goals so avidly that they forget that humanistic conscience is a freely chosen control on impulse. Initiative must be encouraged before responsibility for action can be considered in ways such that the responsibility becomes freely chosen rather than authoritatively imposed. I note here that this premise also underlies my prior advocacy of vocational education as the supervision of action rather than as the grooming for entry.

The teacher in the elementary school has no easy task in nurturing initiative while socializing it. The teacher must both encourage impulse and initiative and see that youngsters stand for social criticism of their actions. The teacher must point the way to socially accepted action; the teacher must insist upon socially accepted action; but the teacher must do so in ways such that the spark of initiative is blown into flame while the fire is banked so that it is controlled rather than destructive. The good teacher in elementary school contributes to such a groundwork for gearing the pupil into the system. The pupil must come to know that he is expected to be himself, that he can be himself, and that there are places in society where he can be himself provided both that he accepts certain restraints upon his passage through those transitions and that he considers the wishes of others while pursuing his own. Failure to lay this groundwork creates difficulty for vocational education at a later time.

Meaning in Competence. Children gain an impression of worth by experiencing competence through their actions. The teacher in the elementary school faces children with two primary means of gaining competence, namely by illuminating intelligence through number and word. The teacher must take great pains to see that the child develops a sense of competence in both mathematics and the language arts because these means for acquiring knowledge obviously condition the child's opportunities for assuming personal responsibility in new situations.

However, the teacher in the elementary school must also be alert to competencies other than those in mathematics and the language arts. Children in the intermediate grades have boundless energy for work which they then start to bind through great repitition of that which they are interested in doing and trying which they feel competent. The teacher needs to be alert to the ideas in which the child invests large quantities of time. Such investments need identification, encouragement, and socialization. The teacher must react in a meaningful way to the emerging personal competencies of each of his pupils. Such action greatly facilitates the resolution of the crisis of industry during late childhood. Furthermore, instruction in the process can help children generalize their capacity to be industrious through choices offered for the development of a sense of competence in study and work.

Meaning in Social Relationships. The child's attitude towards others crystallizes around his relationship among members of his family, particularly his parents. Nevertheless the child's world becomes expanded from yard into neighborhood and then into school. The child's capacity to deal with other people becomes conditioned by the sense of continuity he experiences in his meaning among the members of his widening circle of acquaintances. The school plays an important part in nourishing the child's sense of himself and of his power among colleagues. The school does so by earning the child's trust as he acts autonomously while exercising initiative and working assiduously.

Play offers children opportunity to master social interactions. If consolidated schools markedly interfere with the play of children or wrenchingly detach children from neighborhood without substituting other attachments of meaning, children are deprived of ways whereby they learn the rudiments of being themselves among colleagues. Efficiency in educational arrangements ought not be bought at great loss of opportunity for play relationships among children. Children who are more deprived of play for socialization are more readily alienated from their society.

Meaning in Work Relationships. We have so far considered the importance of keeping the child's sense of possibility alive as he engages in the transitions from home to neighborhood and then to school. The school occupies a critical position in the transition of youth from school to work. Hope for a desired position in society must be initiated, nourished, and made quite certain of attainment. Let us be particularly alert with regard to this last task. The school avoids responsibility for passing youth into work society at the risk both of its own viability and of the hopes of youth.

If the school fails to relate itself to its society, it fails to assume an attitude of service. More importantly it fails to gain the power from adults to commit themselves to the goals of the school and thereby to serve the purposes of the school. This is why I conclude that the viability of the school is in danger when it refuses to be concerned about existing work relationships and/or those anticipated in the future.

The nourishment of cherished hopes in youth is an even more compelling reason for the maintenance of responsibility for the placement of graduates. The school must create a pay-off quality for the labors of youth in the secondary school. This pay-off quality gives meaning to study for youth. Responsibility for the pay-off cannot be shirked as youth is encouraged to develop a personal sense of himself at work in his society. Youth senses when adults urge, but either don't believe or won't go to bat for them.

The vocational school exists to create meaning at work for youth and adults. The responsibility brings with it the responsibility to place graduates. A vocational school must take seriously the responsibility for placement. Otherwise the school will fail to project to its students the belief in employment and in service through work which is so necessary for the young to find career in identity.

Organization for the Program in Occupational Guidance

Organization of the Vocational School for Guidance-in-Education.

The cornerstone of my argument is the presumption that vocational-technical education should exist. Grounds for vocational education now exist in relation to automation, unemployment, and urban redevelopment; the problem is how, not whether, to engage in vocational education.

I have delimited the bounds of the client system in vocational education by making reference to current theory in career development. The capacity to analyze principles of decision and to delineate the career characteristics of the clientele of vocational schools stems from knowledge of occupational psychology as that knowledge is being fashioned into theory in career development. A vocational school can expect this kind of capability when it hires a counselor trained in career development.

The counselor contributes a goal to the vocational school as well as the knowledge of career development which comes from both analyses of the past and sensitivity to the future career implications of today's decisions about work. The counselor encourages among students the will to purposeful action through education. The enigma of freedom arises for the pupil when the counselor acts as teacher and when the teacher, in an effort to rectify difficulties in that realm, acts as counselor should the counselor fail to discharge his role. The assumption of freedom then becomes completely programmed for the young because the young no longer encounter opportunity for choice which is freely extended and can be freely accepted.

I challenge those in vocational education to turn vocational education into a liberating education. The task can be done when we incorporate counselors into the staff of vocational-technical education provided that: 1) we employ counselors with an understanding of the goal and with the capacity to attain it reasonably frequently through professional action; and 2) we organize teaching and counseling so that they are related in a complementary fashion. The present supplementary organization for counseling rather than the necessary complementary organization simply endangers the freedom of youth further. Counseling does not necessarily aid teaching. Counseling only creates capacity, confidence, and responsibility for choosing during the exercise of the possibility to be intentful. Of course, the student can enhance his acquisition of knowledge when he acts intentfully in class. However, the option to act with intent must belong to the student, not to teacher or counselor.

Teacher and counselor can only offer the opportunity and supervise pupils as they attempt to take advantage of opportunity.

Organization of Guidance-in-Vocational Education.

A. Role of the Counselor. Guidance services should be a part of the organization for instruction in all vocational schools. As noted, counselors should be expected 1) to contribute from the theory of career development in both the justification of vocational education and the organization of resource to optimize career development in pupils, and 2) to the performance of the clinical activities needed to achieve the goal of cultivating the will to purposeful action. I here use the term "clinical" to refer to those acts of judgment which the counselor must personally perform in order to cultivate the will to purposeful action most efficiently in each case.

The counselors offering guidance services will encourage the vocational school to conceive its responsibilities as supervising the induction of its clients into work through the means of apprenticeship. The counselors expect the teachers and/or supervisors in the vocational school 1) to set a model for the student at work, 2) to prepare the student for the assumption of responsibility of his craft, and 3) to supervise him in the performance of his craft during the early phases of his work in it. The aim of the supervisor will be didactic. The counselor, on the other hand, 1) will serve as exemplar for the student in the realm of purposeful action, 2) will tutor him in the processes of purpose, and 3) will supervise him in class and at work with regard to his will for purposeful action. The aim of the counselor will be to have the student adopt an attitude of being purposeful. Here, being purposeful does not mean that the pupil's every act must be conducted with purpose. Being purposeful means only that there should be reduction in defensiveness and deceit during reconsideration of lost opportunities for purposeful action. However, this aim can be achieved only through sensitizing the pupil's capacity to anticipate events and to somewhat determine his path as events occur.

Because the basic data used by supervisor and counselor in the scheme of didactic supervision proposed here are so similar, supervisor and counselor will work in close association through consultation about cases. Of course, the powers of both colleagues must be clearly delineated and either party should not hesitate to do what he considers best within his authority even though that alternative is not favored by his colleague. However, the supervisor should recognize that the counselor is expert in the psychology of interpersonal relationships and should allow the counselor to help him improve his supervision of pupils at work in the craft. Improvement will require the counselor to observe the supervision occasionally and then to criticize, plan, and review with the supervisor so that needed modifications can be encouraged and attained. For his part, the counselor should permit the supervisor to oversee him occasionally when the counselor discusses with pupils the specifics of the crafts in which the supervisor is expert.

The counselors will encourage the elementary schools providing students for their vocational school to enhance the meaning for pupils of 1) "the system," 2) competence, 3) social relationships, and 4) work relationships. The counselor will also directly attend to these meanings in the vocational school. He will attempt to see that socialization takes place during the apprenticeship to a craft as arranged in the vocational school. The aim is 1) to have integration with regard to the choice of the apprenticeship itself, and 2) to place the student in a condition of clarification with regard to the choice of work.

B. Counselor-Pupil Ratio. The counselors in the United States believe that they can be responsible for not more than 250 students and still do an adequate job. In determining this ratio, counselors do not include class observations and counseling sessions about those observations in their work inventories. The inclusion of observation and supervision in class can be done only with a marked reduction in the number of pupils a counselor can serve. Probably one counselor per 100 is a realistic estimate. I would personally refuse such an assignment if asked to be responsible for more than 150 pupils. With a larger quantity of pupils assigned to my care, I could not produce that for which I had become accountable.

C. Auxiliary Psychological Services. The counselor should expect to find that a fair percentage of the students in his charge lack ego-development fundamental to the will to purposeful action. The counselor should attempt to secure psychological and/or psychiatric help for such students. Some counselors may themselves be equipped to be of great help. However, the investment of the time of the counselor in activities of this kind should occur only after full discussion with the principal of the vocational school. Some schools may ask counselors to perform this service; others may not. Counselors qualified in psychotherapy will expect to perform psychotherapy in schools. The school frequently offers circumstances quite conducive to success in psychotherapy.

Principals who are prepared to bear the cost and the potential difficulties with pupils, parents, and some professional people should not hesitate to permit counselors qualified in psychotherapy to engage in psychotherapy.

Although I suggest that the decision to provide psychotherapy for students be an individual matter for the administration of a specific vocational school, the school system as a whole cannot afford to ignore the problem. Eight to fifteen per cent of an age group can be expected to possess debilitating problems of ego-development which are sufficiently severe to make education with only regular procedures quite difficult. The school system must find a means of responsibly coping with these children even though a particular vocational school may elect to exclude such students. As you face the problem, remember that the school system ordinarily makes decisions about its psychotherapeutic responsibilities in consultation with psychologists and/or psychiatrists who reside in the community.

The Intrigue and Difficulty of Liberation through Vocational Education

In conclusion, I urge the vocational school to accept responsibility for the attainment of liberation through education. However, the vocational school suffers in two ways with regard to the objective of liberating through vocational education. In the first place the public does not expect the vocational school to liberate pupils through its program. In the second place, the public doesn't believe that liberation can be achieved by training for a technical goal, I have argued that vocational education should assume the goal of liberation through education. Furthermore, I have pointed to how this goal can be facilitated through vocational education. Guidance services will prove indispensable should you attempt liberation through education. However, the attempt will require other modifications in program and budget. Therefore, although I sincerely hope you accept my challenge, I would understand if you didn't.

CHAPTER 17

LIBERATION THROUGH EDUCATION*

Overview

Chapters 12 and 14 have previously alluded to a theory of Guidance-in-Education which Tiedeman is developing. In this Chapter Tiedeman more fully discusses the role of the school counselor from the perspective of his analysis of liberalism as a central force in educational structure and process. He develops a concept of "liberation through education" as a process of individual and collaborative initiative by considering in succession each of four sub-structures of the teaching process: (1) accuracy, (2) discovery, (3) insight, and (4) self. He suggests then that a concept of educational structure cannot be modeled on an analysis of either the teaching or the learning processes alone, but must, instead, be viewed through the union of individual and collaborative activities comprising both processes. This union he then analyzes by means of three primary sub-structures: (1) "incorporation," (2) "authority," and (3) "responsibility."

A fundamental asymmetry in the functional prerequisites of these sub-phases of the educational processes is then invoked as the basis for making an analytical distinction between the roles of the teacher and the counselor. Tiedeman's thesis here is that the role of the teacher is defined primarily by the functional requirements of a "collaborative" mode of "initiative" that emphasizes the pedagogies of "accuracy" and "discovery," while the role of the counselor is, in turn, defined primarily by the functional requirements of the "personal" mode of "initiative" that emphasizes the sub-structures of "insight" and "self." Tiedeman offers further definition of this distinction in roles by suggesting, on the one hand, that the theoretical basis for the teacher's activities rests in static inquiry concerning accuracy and discovery, while his pedagogical judgment involves fluid inquiry concerning insight. On the other hand, Tiedeman suggests that the counselor's activity is theoretically based in static inquiry into insight and self as process with his clinical judgments based on fluid considerations of accuracy and discovery in pedagogy.

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*This Chapter is a part of a speech by David V. Tiedeman which was delivered under title "Liberation through Education: A Goal and Theory of Challenge to School Counselors" at the International Guidance Conference Board, in meeting at Massena, New York, 14 May 1966. Tiedeman owes the origin of these ideas to discussions with William G. Perry, Jr. and John Wortham.

In viewing the position of students, and teachers and counselors within a context of the asymmetrical responsibilities defined by this analysis, Tiedeman concludes with specific implications for administrative responsibility and community support.

As with the concept of "supervised practice" outlined in Chapter 16, the principle of distinction upon which this analysis of educational structure is based entails further aspects of the exploratory-crystallization, discovery-confirmation, tacit-articulate, conscious-preconscious-unconscious, structure-process, being-becoming, individual-collaborative contexts of functional autonomy that have been sounded throughout the book.

The Counselor's Challenge: To Participate in the Cultivation of Liberation through Education

The practice of Guidance in education as a complement to teaching, not in the mere improvement of teaching itself, leads to liberation through education. However, despite our present programs in Guidance, liberation through education now occurs only at a spontaneous rate, not at a rate which might result from more deliberate cultivation of freedom through education. This then shall be my[*] challenge to all of us counselors; namely, that we cultivate the rate of liberation through education more assiduously than has been our wont in the past.

Progress in Recent Time

Although my challenge essentially starts from the premise that we in Guidance lack adequate understanding of the goal of Guidance itself, I first pause to acknowledge considerable gains in the past fifteen years even with present understandings for our practice. The practice of Guidance has not stood still even though the practice has also not advanced as far as I think it can.

Practice in Guidance has expanded only in secondary education since 1950. Furthermore, this expansion has been a response to forces largely external to the practice of Guidance itself. These forces include increases in enrollments, aroused public interest in education for national survival, and technological change which of late has pushed vocational choice out of the realms of social convention and convenience and more into the realm of enlightened individual responsibility. These external forces have produced real gains in the lowered ratio of students to counselors which reflect increased public confidence in the outcome of practice as well as increased need brought on by external circumstances.

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[*] Since we are again trying to create the illusion of an audience, we let Tiedeman speak in the first person in this Chapter.

At the higher levels of education, Guidance is not well developed. The existence of seminars, tutorials, and adviserships which tend to bear the form but not the substance of Guidance, acts to reduce institutional interest in Guidance practice at this level. Administrators and teachers generally confuse tutoring and Guidance. Furthermore, there is not much understanding in the higher circles of education that the cultivation of intuition is as important a part of education as is the cultivation of efficiency.* As a result, Guidance services are not deeply imbedded in the campuses of colleges or universities.

Finally, at elementary levels in education, Guidance also seems to be developing at a rate largely proportional to the rate of population expansion. The practice of Guidance at the elementary level is largely prosecuted through the field of psychology. Psychology has support from psychiatry for interest in the prevention of mental illness. However, psychology has not gone far toward changing public knowledge of its service from that of first-aid like treatment to the cultivation of coping modes in relation to the expression of responsible intuitions.

In general then, I believe that there has been a small proportionate gain in counselor time for students in the secondary school but that there has been little or no proportionate gain in counselor time per student in either elementary or higher education. The result is that those of us in Guidance practice experience a sense of perpetual "cliff hanging." There is considerable public pressure to reorganize the role of the teacher. The new curricula are presently the primary modes for such re-organizations of roles. Computer-based presentations and evaluations of student responses are on the near horizon, for the next decade. In these impending changes, the counselor today finds himself essentially without enough time, resource, or theory to reorganize his role while the teacher role is simultaneously under re-organization. This is so in the secondary school as well as at the other two levels of education despite the growing increase of counselor time per student at the secondary level. Especially at the secondary level, the present roadblock is a lack of theory. Therefore, I address this roadblock in the remainder of my paper.

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*Professor Richard M. Jones of Brandeis University has just completed one of the best statements regarding these issues: Fantasy and Feeling in Education, the author's unpublished manuscript (1967).

Directions of Argument with Foundations

My purpose here is to lay out a more credible linguistic framework for improving practice in Guidance. I do so in essentially six parts. The starting and concluding sections of the primary argument first analyze and later synthesize the four sub-structures of pedagogy and Guidance which are the transition in my argument. The four sub-structures of pedagogy and Guidance which I shall consider are: 1) accuracy in education; 2) discovery in education; 3) insight in education; and 4) self in education.

Although my argument for self in education as goal and process of education can presently be only logical and organizational, I first want to chart a more familiar background for the development of self-in-process. In doing so, I also intend to offer available grounds for the likelihood that my prescription of logic and organization which follows can be realized.

Note as I proceed that I place cognitive development at the core of my analysis of self-in-process. In my analysis of pedagogy I consider first the concepts of "accuracy" and "efficiency". Here the work of B. F. Skinner which has given rise to programmed instruction is most relevant.

I will next deal epistemologically with the capacity for thought as I analyze discovery in education. Piaget (see Flavell, 1963) provides excellent foundational observations on the development of these capacities, and I will attempt extremely modest augmentation of those foundations by sharing with you my experience in trying to make a "science-like" procedure explicit for students in the Harvard-Lexington Summer Programs. In this regard I remind you also that Bruner (1962, 1966), deals with the pedagogy of discovery and with the substantive structures of several school subjects which make such pedagogy possible and efficient.

In the last two of my transition sections, I will bring the psychosocial position of the student into relief as I consider first insight and then self as process. Erikson (1959, 1961) beautifully lays out the developmental processes of insight and self. Super and colleagues (1963) bring the self concept, as experienced through vocation, into further relief. O'Hara and I (Tiedeman and O'Hara, 1963) introduce personal development through career development into Erikson's and Super's general writing about self.

Rogers (1951) and Shlien (1962, 1963) give clear definition of self theory and of some technique capable of bringing self into awareness and operation. My colleague, William Perry (1967), has nicely delineated the development of liberation through education in some detail. Furthermore, Maslow (1962) and White (1963) are originating a theory of motivation in which self-englightening competence figures centrally. This theory is at the core in my belief in a coping, not defending mode for self-in-process.

What I am trying to do by means of the inventory which I have just made is to bring awareness that there is basis for what I will now attempt to integrate as a goal for Guidance-in-Education. Furthermore, I have tried to indicate the knowledge, time, and attention which will be needed in giving substance to my prescription. A form of substance for my prescription on help is that of specifying an organization of education needed for attainment of my goal. I attempt this task after first laying out my logical analysis which I now undertake.

Teaching, Learning, and Education

I start what I hope will be our joint search for expanded theory in Guidance by reflecting on the meaning of "teaching" and "learning." In teaching, initiative first rests with the teacher. People, ideas, things exist; for example, 1) the school organization, 2) the subject the teacher is responsible for teaching, 3) the concepts and their interrelationships inherent in a unit selected by the teacher, 4) the teacher's plan for today's action, and 5) the responsibility for the teacher momentarily to respond to students within plan, unit, subject, and school in ways such that the teacher's understanding becomes shared by his students. Such conditions delineate the paradigm of teaching; namely 1) the presumed sharing 2) with students 3) of knowledge (or culture) 4) under circumstances of initiation 5) by an officer (the teacher) of the society.

What then is the meaning of "learning"? In learning initiative rests with the student. But there are two forms in which initiative can be expressed by the student. In one form, the personal form, initiative exists only internally in union with personal needs, desires, and purposes. I shall return to consideration of this personal form at a later point. First I shall consider the second form in which the student can exercise his initiative in learning, namely the student-teacher collaborative form.

Learning as it takes place in school is primarily a collaborating form of expressing student initiative. In this student-teacher form of collaborating initiative in education, the student is to incorporate something; for example, the concepts and their interrelationships inherent in the unit selected by the teacher, the plan of the teacher, the responses the teacher makes to the student within the teacher's plan, unit, subject, and school.

The exercise of learning initiative through collaborative student-teacher endeavors encompasses three sub-structures which are worthy of specific note for us. All of these sub-structures stem from the juxtaposition of collaborative and personal initiatives inherent in the paradigms of teaching and learning which I have just specified. Therefore, think of teaching and learning together as I attempt delineation of their three important sub-structures in initiative. If you think in that comparative frame, I believe you will be helped to "see" my sub-structures within the juxtaposition I myself will make for you.

The first sub-structure of my union of teaching and learning is "incorporation." The sub-structure of incorporation stems from the reality, the prior existence, of subject matter which is inherent in teaching and learning in schools. Students being taught are expected to incorporate an idea which previously was possessed by the teacher only.

The second sub-structure also stems from the fact of prior existence of subject matter in the teaching and learning paradigms. In incorporation, the student is subject to the authority of the teacher. In the "authority" sub-structure incorporation may be hindered, unaffected, or facilitated by the existence of student need or expressed desire for incorporation. It thus becomes imperative in education to favor rational authority for learning. Students are to come to belief on rational grounds. However, rational grounds do not require an absence of authority. Authority can be rational as well as irrational.

"Responsibility" thus becomes the third important sub-structure emanating from juxtaposition of the paradigms of teaching and learning. The teacher attempts to share initiative for assimilation of his subject with the student. If the student assumes responsibility for the assimilation, the teacher finds the student's motivation to be high. If the student fails to assume responsibility for incorporation during assimilation, the teacher finds the student's motivation to be low, or non-existent. Obviously, a student without apparent initiative does not necessarily lack motivation, per se. The student may have considerable initiative which he expresses in the personal mode. The student's apparent lack of motivation may merely mean that there has not been a successful sharing of initiative during incorporation in the collaborative mode. In such event, fault could rest in the organization of the student's sub-structure of authority during assimilation. On the other hand, fault could also rest in the external structure of authority; the teacher may be at fault. Where fault rests thus becomes a professional matter of considerable import. Without shared initiative, incorporation during assimilation of teaching will lack the power of becoming generative; assimilation will either not occur or remain reproductive.

I have specified the sub-structures of incorporation, authority, and responsibility inherent in the concept of initiative exercised in the teacher-student collaborative context involved in teaching. I turn next to relate teaching and learning to education. The term "education" is used in several senses. In one use, education is made synonymous with teaching.

This curricular use of the term "education" incorporates subjects and pedagogy into the meaning of education but omits learning. A second sense for education is as synonym for learning. Learning here enters the meaning of of the term but ordinarily to the exclusion of the curriculum. Therefore, neither common use provides explicit focus for personal initiative as a goal of education.

I believe that the exercise of personal initiative represents the highest goal of education. Therefore, I suggest we think of education not as subjects, pedagogy, or mere learning but as a concept subsuming teaching _and_ learning. In that linguistic frame for the term "education," we can examine an educational organization of ideas, things and persons with promise for the cultivation of personal initiative within a framework which essentially exists for the cultivation of collaborating initiative. I shall engage in my examination by reference to 1) accuracy in education, 2) discovery in education, 3) insight in education, 4) self in education, and 5) responsibility and freedom in education.

Accuracy in Education

My paradigm of teaching calls for articulation of 1) the presumed sharing 2) with student 3) of knowledge (or culture) 4) under circumstances of initiation 5) by an officer (the teacher) of society. Knowledge is the pivotal idea in my paradigm. The teacher is the agent of "transfer". The teacher has "possession" of this knowledge. These conditions bring into stark relief the necessity for accurate specification by the teacher of what is to be transferred. Without accurate specification, the teacher cannot make the subject clear as it stands between himself and his student.

If he does not, the possibility for incorporation attributable to the teacher in turn becomes nil as clarity in the subject fades from the student.

Public expectation that teaching will foster incorporation during assimilation brings the need for transfer from teacher to student into focus. The idea inherent in prior knowledge thereby assumes critical importance. Experts proceed by a process of abstracting ideas, making them clearer, more vivid. The teacher in his turn tends 1) to bring the student into relation with the ideas and 2) to sharpen the student's awareness that those ideas must come to reside in him if they are to have later power. Thus the shaping of behavior becomes critical in pedagogy. Accuracy and efficiency in assimilation become, and must remain important watchwords in education. The problem is not that these watchwords be present; the problem is that the timing and sequencing of their presence be subject to the adequate professional judgment of a teacher.

Discovery in Education

Responsibility takes form in collaborating initiative as personal initiative differentiates from uncritical acceptance of ideas which the teacher proffers the student for incorporation. Discovery can be a pedagogical means which the teacher may employ first to encourage personal initiative and to facilitate its development when and as it appears.

The teacher employs the pedagogy of discovery within the frame of collaborating initiative. Discovery teaching is, however, bounded by a teacher's 1) prior understanding of the concept offered in the discovery mode and 2) expectation of what will be discovered. In discovery teaching, the teacher arranges students in relation to resources so that students have every encouragement to operate on the resources. The basic paradigm of discovery is 1) comprehension 2) of idea 3) in relation to operation on resource in which the idea has its foundations.

A linguistic procedure exists which can in turn subsume the meaning of discovery. The linguistic procedure consists 1) of defining a problem, 2) of inventing alternative explanations for the phenomena observable in relation to the problem, 3) of undertaking observations designed to select from among competing explanations, 4) of investing the more plausible explanations with belief held in a committed but tentative fashion, and 5) of operating as if the belief were true until such time as further relevant evidence from personal or shared experience causes the person to tumble the whole explanatory system about again in search of new crystallizations.

Because this science-like procedure can be expressed linguistically the teacher can acquaint students with the language of scientific procedure while engaging them in the actual process of discovering. It remains a moot point as to when discovery should be given explicit denotation. However, it is eventually necessary for the language to be invested with meaning through prior experience if students are to comprehend their experiences of personal initiative within the collaborative circumstances of initiative encompassing discovery in schools.

The clarification of an idea during operations on resources represents the main paradigm of discovery as I have previously noted. In this paradigm ideas can be given form in direct relationship to possibilities for action. The subsumption of the specifics of an idea by more general ideas of direct relevance to action constitutes a form of structure which Bruner

(1962) so ably elucidates. However, I pause here to create a differentiation of considerable import for my later argument. Bruner makes use of the concept of subsumption in direct relation to the ideas of a subject. He thus limits the concept to the presentation of possibilities of relevance to the particular domain of the subject itself. Bruner speaks then of the emergence of higher order concepts within a subject, not of higher order concepts of subject in explicit life action. Although it is true that the teacher experiences greater success in helping students to discover higher-order conceptions within the structure of a subject by placing that subject in a use context in life, the teacher's application have two bounds. One bound is that of direct relevance. An immediate and explicit subject serves to determine the relevance of the teacher's illustrations. The second bound is that of time. The teacher must illustrate in terms of the immediate or the presently quite vivid in imagination, not in terms of very future possibilities or of possibilities which we associate more with fantasy than with imagination.

Consider now the importance of the distinctions which I have just outlined vis-a-vis the work of teacher and counselor. Within the framework so far developed, the distinction within the paradigm of discovery that the teacher deals with subject-relevant and more immediate contexts of use offers two bases for further distinction which are of great importance. The teacher is bound by relevance and time in terms of student expectations; the counselor is less bound in these terms. However, as I show later, the counselor is himself bound in terms different from the teacher.

Insight in Education

When a teacher uses discovery as a pedagogic device, personal initiative has opportunity for expression within the context of collaborative activity. A perceptive teacher has opportunity within this context to help a student come to understanding of aspects of his own style in personal initiative. The help a teacher can provide is extended through tutoring and advising the student in application of the science-like procedure of discovery. Students who develop an understanding of the procedure of discovery possess the capacity for realization of insight. Understanding presumes the capacity to offer accurate explanation of the procedure of discovery in relation to discoveries which are taking place. In short, understanding presumes both that a person has discovered and that he can offer an accurate and explicit explanation of his discovery.

As a person confirms his discoveries, he has opportunity to invoke the scientific procedure, which he presumably has prior linguistic comprehension of, to order his statements of those discoveries. If, and as, the person does so, he forges a place in his explanations where he is forced to invoke the concept "problem." A "problem" is a term which is necessary to explicit linguistic expression of something which is known only tacitly prior to its expression. (This distinction is developed further in Chapter 18.)

Polanyi (1958) offers significant commentary upon the scientific method in relation to the making of tacit understandings into explicit understandings. However, we have at our own disposal two means of making what I now hope is your tacit understanding more explicit for you. I do so by using as illustration my own turning of the tacit understanding underlying this paper into explicit understanding for you.

First consider my explicit formulation of this argument itself. The explicit formulation did not exist before I sat down to frame it. Indeed, I can assure you that it arose only from considerable thought and inner turmoil. Furthermore, I can assure you that my inner turmoil persisted throughout the explicit framing and continues during its presentation to you. However, now that my formerly tacit understanding is becoming more explicit I can recognize many points in my writings and relationships in which aspects of the understanding had previously appeared and been in play. Furthermore, I can remember numerous meetings with family, students, the public, and colleagues in which I have been asked to bring murky aspects of my tacit understanding into clearer expression for shared understanding. All of those circumstances would bave to be a part of my explanation for the existence of my "problem" condition as I sat down and started to live in imagination this present sharing with you. They are the conditions giving rise to "insight" which brought forth this speech.

Now consider the problem of insight in the more general context of school. Take this as our second effort to bring insight into clarity. Remember that in the school context we have initiative primarily in a collaborative context. Insight which gives rise to a tacit understanding stems from the union of personal initiative expressed in context of collaborative initiative. The patterns of experience and thought of the student are brought into play with the patterns of thought and experience which are being created by the teacher through the pedagogy of discovery. If the student assumes responsibility for the resources and limitation imposed by the role of the teacher in the pedagogy of discovery, insight can occur. If the student fails of this responsibility, insight cannot occur. Assumption of that responsibility is not, of course, a sufficient condition for the emergence of insight; however, it is a primary necessary condition.

Now reflect upon my formerly denoted sub-structure of authority in relation to the assumption of responsibility during learning. The failure of the student to assume responsibility during teaching by means of discovery may result from difficulty he experiences with authority. Furthermore, he may be frightened of the opportunity for personal initiative which is being offered to him. This is a type of condition that the teacher can deal with in a tutorial or advisory type of relationship with student. However, the student may, instead, also be confusing the freedom of personal initiative with the license of denying the necessity for collaborating initiative. Such a situation must bring the teacher himself to fore as a participant in the problem and the problem must then be handled by a counselor or psychologist working in cooperation with the teacher.

Thus the concept of insight brings me to the turning point in my argument for the dual roles of teacher and counselor in education. The pedagogy inherent in teaching primarily stems from both accuracy and discovery in education and only secondarily from insight. This must be so because the context of teaching is by societal definition primarily a collaborative context. Therefore, the teacher, starting from the "outside" with an interest in incorporation, inevitably encounters the problem of "authority" inherent in collaborative initiative. On the other hand, the techniques inherent in Guidance in education stem primarily from the concept of insight and only secondarily from the concepts of accuracy and discovery in education. This must be so because the context of Guidance is primarily that of facilitating personal initiative. Therefore, the counselor reasons from the "inside" toward the "outside" and primarily meets the problem of incorporation with the issue of authority inherent in the union of personal and collaborative initiatives. The counselor remains as an officer of education because he is interested that insight occur in all students with responsibility. The concept of responsibility demands that a person come to understand the process of insight itself.

I pause here to underscore the asymmetrical nature of the responsibilities which my linguistic frame attributes to the teacher and the counselor, both working in collaboration to facilitate teaching and learning within the organization of education. Schwab (1962)* makes an observation relevant to this matter, pointing out that there are two phases of scientific inquiry. One phase of scientific inquiry is static inquiry. In static inquiry, assumptions set boundary conditions on the formation of problems. Scientific solutions to problems so defined are then worked out within those boundary conditions. Static inquiries give rise to more and more minute investigations of conditions which become refined through one static inquiry after another. The complimentary phase in Schwab's view of scientific inquiry is fluid inquiry. In fluid inquiry the boundary conditions of static inquiry are themselves subject to reason during the process of inquiry. Boundary conditions may or may not be considered in relation to the results of static inquiries which they have formerly circumscribed. However, scientific insights of a fluid nature are frequently more powerful if they result in higher-order organizations which encompass earlier lower-order organizations of static inquiries.

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*See also Kuhn's view of Scientific Revolution as discussed in Chapter 15.

I find Schwab's concepts of great use in considering the asymmetrical conditions in which I prescribe that teacher and counselor work. The teacher works in terms of static inquiries in the pedagogical realms of accuracy and discovery and in terms of fluid inquiry in the realm of insight. The counselor does the reverse. The counselor works in terms of static inquiry in the realm of his techniques (insight and self-as-process) and in terms of fluid inquiry in the realms of pedagogical accuracy and discovery. Thus two procedures each asymmetrical for each officer of the school can become symmetrical for the student when teacher and counselor collaborate. I shall return to this distinction once again after I next discuss self in education.

Self in Education

In delineating the concept of "insight," I first invoked a need for the precondition of understanding scientific procedure during discovery pedagogy. Then through illustration, and later through definition of the interposition of personal and collaborative modes of initiative under expectation of responsibility, I provided an explicit linguistic frame for the concept of insight. Now let's take a last step, namely, the step of bringing a linguistic understanding of the process of insight into use in the analysis of life experience itself. If understanding ensues from such a placing of familiarity with process structures into viable relationship with life experiences, self appears in education. That is, if a person first succeeds in getting formal grasp of the process of insight and then can reasonably freely make use of this process with accuracy in his life context, he achieves the capacity to comprehend self. I believe that education should be organized so that this capacity becomes viable. However, you will note when I discuss freedom and responsibility that I try to stop short of specifying need for comprehension itself. Self comprehension is itself an individual, not an educational, matter.

The exercise of personal initiative is central to self in education. Through reflection and through analysis of the unions of personal and collaborative modes of initiative, 1) during discovery teaching and 2) during discovery of personal history giving rise to insight, a student can come to ever clearer understanding of the operation of his personal style in personal initiative. He thereby comes to know himself, not as an immutable object, but as a process in which the expression of personal initiative brings him into collaborating contexts with the personal initiatives of others.

I presume it obvious at this point why I paused in discussion of discovery in education to deal with the limitations both of subject relevance and of immediacy which bound the role of teacher. Helping the student to place his personal initiative within his history of personal insights gives rise to conversation of substance significantly different in kind from the substance and timing of school subjects. Thus the very context by which self as process comes to be known has sensible distinctions from the context of subject mastery which defines the teacher's interests in the cognitive development of his students. Furthermore, the very mode of the context is different. The mode in discovery teaching is to make understanding of tacit principles explicit. The mode in insight analysis is to make understandable the acknowledgment and confirmation of tacit understandings themselves. My expectation for teacher and counselor when they work in complement on this problem is that the two will somehow succeed in making the process of self change sufficiently explicit so that the student comes to master self-change itself, that is, to comprehend what happens when he changes and to assume responsibility for change when he attempts it.

Freedom and Responsibility in Education

I have outlined a frame within which freedom for a student may emerge in the course of his education. I did so by placing the personal initiative inherent in learning into direct relationship with the collaborative initiative inherent in teaching. Through that juxtaposition I have attempted to facilitate our understanding of self in education through analysis of the pedagogy of accuracy, discovery, insight, and self.

Freedom without restraint is license. Independence practiced unilaterally is tyrannical or insular. For both these reasons I pause now and stress the necessity for responsibility as a compliment to freedom if the harmonious existence which I desire for all students is to ensue. I offer my stress on responsibility as antidote for some views fashionable in counseling. We counselors are really officers employed in an educational frame. We thereby obligate ourselves to press for the understanding of personal initiative _within_ the restraints which society places upon its educational institutions. Furthermore, we cultivate analysis of self-in-process within the collaborative context of teaching and learning. Therefore, we truly must favor responsibility on the part of our students. We should make this more clear to students, to the public, to colleagues, and to ourselves. The independence we want for students is not just independence, it is autonomy in _inter_dependence.

In conclusion, I encourage you to think 1) of the development of understanding of self, and 2) of organizing so that freedom and responsibility conjointly develop.

Self in education develops over a considerable period of time. Comprehension of self requires the capacity to reason. Furthermore, it requires the capacity to treat the self as a linguistic object. The student must also be able to place his self in relation to situations not yet experienced but imagined. The student must be capable of treating self as if it were "becoming" by moving through a series or sequence of states and properties within the time framework of life so that the discontinuous aspects of a next state are assimilated with only some, not serious, threat to the continuous aspects of cognitive development of self in education as the self is presently experienced. The student must also possess an intelligence system 1) by which his plan can give rise to searching, and 2) by which information from searching feeds back so as to cause continuation or modification of plan. These differentiated circumstances must be practiced sufficiently so that they are used but do not markedly interfere with reasonably free access to intuition. In short the processes by which self knowledge arises must be differentiated and in turn be integrated into the continuous experience of thought in action. All of this takes time; the time of a life in fact. The process is never complete as Erikson (1959), Rogers (1951), and Shlien (1962, 1963) so ably state. All of this differentiation and integration takes tutoring; the tutoring of Guidance-in-education to be exact.

The form of organization of Guidance-in-education which is needed for the attainment of the goal I have laid out must itself safeguard the very freedom which Guidance presumably seeks to facilitate, namely the freedom for a student to be himself. I think that we should safeguard this freedom in two ways as we staff for Guidance-in-education.

One of the ways we should safeguard the freedom of the student to be himself is to staff schools so that both counselors and teachers are employed. Furthermore, we should organize the counselor's work so that the major proportion of his contacts are directly with students, not teachers. My basis for recommending this complimentary organization for Guidance-in-education is the same basis which underlies the governments of our countries, namely, divide and limit authority and trust the citizen to judge and to balance separated authorities. By analogy, I suggest that we leave the student in contact with the teacher while he experiences the expectation of self in education as projected from context and theory in which collaborating initiative is in core. I simultaneously suggest that the student also be left in expanded contact with the counselor from whom he experiences the expectation of self in education as projected from context and theory in which personal initiative is in core. I then trust that the intelligence and intuition of students will grow in efficiency, responsibility, and creativeness in this collaborative context of teacher and counselor. The arrangement leaves the student as final arbiter of his freedom and responsibility. Because he is in direct touch with two professionals, the student can, of course, play the one against the other, to his own advantage or disadvantage. Because of such a risk, I trust you see the wisdom which I presume for principals in my suggested organization. The principal sets the climate in which diverse expectations and strategies are brought into collaborative play by ingenious students. Ingenious students can create a hell for separated professionals whose functional separation becomes disfunctional estrangement. It remains for principal to see that the interplay remains reasonable for student, parents, teacher, counselor, and himself.

A further commentary on the complimentary organization which I recommend may serve to clarify these ideas. You will recall that my discussion of insight in education concluded with an analysis of theory and responsibility which I attributed to teacher and counselor. I made use of Schwab's (1962) concept of the static and fluid modes of scientific inquiry. I indicated that theoretical basis for the teacher's activity rested in static inquiry concerning accuracy and discovery in pedagogy and that his pedagogical judgment involved fluid inquiry concerning insight. I further indicated that the counselor's activity was theoretically based in a static inquiry into insight and that his clinical activity involved fluid consideration of accuracy and discovery in pedagogy. Now think of the student's position in this ascription of dual authorities and responsibilities to teacher and counselor. The student has opportunity to become informed about the static properties of accuracy and discovery in pedagogy as used by the teacher and about the static properties of insight as used by the counselor. The student also has opportunity to experience the counselor's fluid use of accuracy and discovery in pedagogy and the teacher's fluid use of the concept of insight. As the student does so, he has the best opportunity I can conceive for him of having to give fluid expression to the simultaneous static aspects of the knowledge of two complimentary professionals. This condition gives the student opportunity to be creative within the expectation for responsibility projected by persons who are in authority over the student, but who are in complement regarding their incomplete understandings of the student. Here rests freedom for students if there be adequate safeguard on counselors. I make what will prove to be a last remark on just that score, namely, safeguards on counselors.

A second way we should safeguard the freedom of the student to be himself is to staff so that every Guidance program in a school system employs at least one, and preferably more, professionally trained persons. The cultivation of freedom and responsibility in the organization which I advocate requires that students come to set goals for themselves. Counselors can readily interfere with this process unwittingly even though they are in actual complement with teachers and in direct access to students. Therefore, this professional just must have a general oversight with respect to the considerable power which I am advocating that he bring into students' lives. Only through the supervision of counselors by the intelligence of a well-trained guidance psychologist can I rest easy about the advocacy in which I have engaged with you.

The Challenge in Review

I have covered considerable ground since stating my initial and somewhat hazy challenge. I first noted that counselor time is increasing proportionately primarily in the secondary school. I then challenged those in secondary schools to do with that increased time something different from what they have been doing in the past. Unless we do something different as counselors, teaching and technology will soon displace counselors. Furthermore, Guidance programs will not expand to elementary, tertiary, and work levels.

The linguistic frame I present is one in which liberation through education becomes an explicit part of our organization for education. In specifying my meaning for liberation through education, I first analyzed teaching and learning. There I noted the dual modes of initiative, collaborative *and* personal, which are inherent in the union of teaching and learning. I then suggested that *we* think of education as a system in which *students* develop responsibility. *They* develop responsibility when *we* both make it possible and expect it. *We* encourage *students* to grow in understanding their personal initiative as *they* collaborate with teachers *who* encourage and expect students to grow in understanding *their* initiative in the collaborative context of incorporating the *teacher's* knowledge. My support of this suggestion led me to explicate the pedagogies of accuracy, discovery, insight, and self in education. In the course of those explications I specified a role for the teacher as defined primarily by the collaborative mode of initiative with emphasis on the pedagogies of accuracy and discovery. I specified the role of counselor as defined primarily by the mode of personal initiative but with emphasis on insight and self.

Finally, I dealt only sketchily with the development of self in education and with organization for self in education. My understanding of goal and program is limited as well as hazy. There rests my challenge. Make my understanding yours and bring it into being. As you do we will all learn more about the development of liberation through education and about how we can organize better to facilitate that development. In the meantime, my structure is intended to offer you a goal and a set of linguistic categories which you can use to explain your interest and to diagnose individual cases in which accuracy, discovery, insight and self are not appearing in education.

Let's try my suggestion. The goal represents the way to improve our culture.

CHAPTER 18

PREDICAMENT, PROBLEM, AND PSYCHOLOGY*

Overview

The third and final chapter of this section is based on Tiedeman's presidential address to the Division of Counseling Psychology, American Psychological Association. In that address (delivered at the annual meeting of the Division in 1966), Tiedeman further outlines the challenge which he herein invites his psychological colleagues to share with him. This challenge he frames within the twin paradoxes of an equal regard for tentativeness and commitment, reflection and implementation, in purposeful action: "When a man fails to exercise his capacity for tentativeness and reflection...he fails to express the full range of his humanness. He acts without thinking. When a man fails to exercise his capacity for commitment and implementation he is impotent. He thinks but he (does not) act." Tiedeman suggests that the humanness and potency of purposeful behavior requires the capacity to integrate thought and action, first in goal pursuit and then in the process of choosing itself. ...that we must all grow in our capacity to bear the inconsistencies of these two paradoxes as a human predicament to be confronted, rather than as an intolerable condition to be dissolved or escaped and denied.

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*This chapter is based in part on a paper of David V. Tiedeman which was published under title of "Predicament, Problem, and Psychology: the Case for Paradox in Life and Counseling Psychology" in Journal of Counseling Psychology, 1967, (Volume 14, pp. 1-8). Tiedeman is indebted to Stanley J. Segal, friend and colleague, who made him write this speech and helped him to do so. Tiedeman reveals his predicament to you through this seeming disavowal. May you allow him to experience this chapter as predicament, not problem!

In reviewing the conditions which facilitate our capacity for such confrontation and development, Tiedeman returns to the analysis of educational structures and roles outlined in Chapter 17, making three additional points: (1) a pedagogy bridging accuracy and discovery should emphasize understanding of the means of discovery. (2) The pedagogical bridge between discovery and insight should be founded on a cultivation of the realization that insight is inevitably personal. (3) The pedagogy bridging insight and self as process should cultivate the student's confidence in his capacity for insight.

Finally, in the conviction that the creation of educational conditions consistent with such principles of development demands a collaborative commitment to resources and activities with which the present affiliations of his colleagues are seriously inappropriate, Tiedeman suggests that counseling psychologists confront more directly their own professional predicament.

Predicaments and Problems in Life

Life confronts the individual with both predicaments and problems. A predicament presumes a condition to be tolerated; a problem, a condition to be resolved because it is intolerable. The tendency for the individual, unfortunately even those who have chosen the guidance role, is to lose sight of the distinction between predicament and problem. When this occurs among us counseling psychologists, we thereby unwittingly permit many people to grow up without realizing the essential paradox in choice. I* share my deep concern for our delinquency in this matter with you today.

I am concerned with two predicaments in choosing. The first, or _goal_ predicament, exists in two parts, as follows:

a. Current goals require commitment; yet personal development requires tentativeness towards the consequences of an immediate choice.

b. Current choices require implementation; yet personal development calls for reflection on alternative paths of development.

The second predicament of my concern is _choice_ predicament. The development of resolve to accept the predicament of choosing among life's opportunities presumes the capacity to bear the above two sub-aspects of goal predicament, a secondary form of predicament arising out of the more fundamental choice predicament itself. However, contrary to logic, I shall address the more differentiated goal predicament itself before attempting delineation of the more rudimentary choice predicament. I do so today because I can make the rudimentary choice predicament apparent only against the more differentiated goal predicament. I cannot yet achieve the reverse sequence.

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*We once again let Tiedeman address you in person in this Chapter. "Listen" as you read!

Predicaments and Problems in Goal Pursuit

Tentativeness and commitment; reflection and implementation - in goal pursuit the first of each set is inconsistent with the second. To be tentative toward a goal is not to be committed to it; to be committed is not to be tentative. To reflect upon a goal is not to implement it; to implement is not to reflect. Yet either member of each pair represents a dangerous condition when it exists alone. To be committed to a goal without tentativeness toward it is to abdicate one's critical faculty; while to be entirely tentative is to abdicate one's capacity to believe. To implement without reflection is to abandon opportunity for subsequent review and revision of that action; while to reflect without implementation is to abdicate one's capacity to act.

When a man fails to exercise his capacity for tentativeness and reflection in goal pursuit he fails to express the full range of his humanness. He acts without thinking. When a man fails to exercise his capacity for commitment and implementation he is impotent. He thinks but does not act.

To be both human and potent, man must develop his capacity to integrate thought and action, first in goal pursuit and then in choosing itself. Because the two conditions are inconsistent he must grow in his understanding of his need for both capacities so that he may bear their inconsistency as a predicament, not as a problem; as a difficult condition to be confronted rather than an intolerable condition to be dissolved.

Tentativeness and commitment; reflection and implementation - each pair represents an inevitable paradox in goal pursuit and in deciding to choose at all. In helping man to cultivate his capacity to bear, to use, and to enjoy these predicaments as a condition of his life, Guidance will cultivate his capacity to be both human and potent.

Plan and Purpose

Understanding of the predicament inherent in tentativeness and commitment, reflection and implementation during goal pursuit and choosing to choose emerges only haphazardly during life, if at all. I believe that the probability of such emergence is increased if:

1. Cognitive capacity, no matter at what level of intellectual ability, is sufficiently developed to enable the person to reflect upon action.
2. Understanding and appreciation of goal and choosing predicaments is a primary educational goal.
3. There is expectation that understanding of the predicament of tentativeness and commitment in goal pursuit and choice election facilitates decision-making during all of adult life.

I shall not here address the question of capacity; I want to take that for granted. Rather, I shall be engaged in laying out the conditions under which the understanding and appreciation of predicament as a modifier of thought and action in both goal pursuit and choice election can be better cultivated in education. This is to be my focus because I am convinced that guidance in education, i.e. collaborative efforts of guidance personnel with all other educational personnel each fulfilling their appropriate role, holds out a genuine hope for increasing the potential of man to move towards humanness and potency.

I speak as I do because I want to convince counseling psychologists of the value inherent in themselves expecting an understanding of predicaments to be a developed capacity at least by adulthood. In the presence of expectation for understanding and appreciation of predicaments in goals and choices people are more likely to gain such understanding and appreciation of them. This expectation that collaborative examination of actual experiences form within a framework of understanding both kinds of predicaments will then provide all participants in the collaborative effort with crucial information: with, that is, information about the extent to which understanding and appreciation of the predicaments of tentativeness and commitment are emerging during the life cycle through plan rather than chance.

Understanding Goal Predicament

To be understood, a goal predicament must be consciously recognized; it must be analyzed with the expectation of understanding; and it must be recognized as an omnipresent condition of human life.

Recognition of Goal Predicament. Predicament is present when either commitment and/or action lead the individual to movement toward a goal that is unlikely ever to be gratified: e.g. the average student applying to a major university; the young adult facing the draft while being unable to override his strong objections to present foreign policy; the factory employee who is a high-school drop-out desiring a high management position. In essence goal predicament is present when commitment is made and/or action is taken - in the absence of tentativeness and/or reflection - so that unrealistic anticipated goals are sought. These goals may be unrealistic because of any of the socially imposed constraints acting upon the person. Recognition of goal predicament then requires that the individual recognize the disparity between commitment and/or action and the unrealistic anticipated goal. Such recognition can only come from experiences of goal commitment and action that become, or are helped to become. conscious to the person because disparity with regard to goal and present capability is consciously experienced.

Analyzing of Goal Predicament. Recognition of the disparity between commitment and/or action and the anticipated goal should lead to the analysis of goal predicament. Analysis immediately brings reflection to focus on commitment and action and on anticipated goal. Although it is possible that reflection on commitment, action, and anticipated goal do not result in tentativeness toward one or the other of these, it is unlikely that recognition of predicament and reflection on predicament will not lead to consideration of either alternative action or goal.

Analysis of predicament then requires that the individual bring both tentativeness and reflection to focus on action and goal in order for there to be determination of either alternative actions or alternative goals. If such reflection and tentativeness leads the individual to see a way of maintaining goal through alteration of actions and commitments then we should recognize this as problem rather than predicament. It is when reflection and tentativeness make it clear that the anticipated goal has been unrealistic and commitment to a new goal with the possibility of no change or great change in action is necessary that analysis has led to reinforcement of the recognition of predicament and the role that tentativeness and reflection can have in leading to new commitments/actions.

Expecting Goal Predicament. Discrepancy between goal and present actuality, however, as a predicament rather than as a problem in turn poses predicaments or problems for adults charged with responsibility for helping individuals to integrate discontinuity into the continuities of his personality. Adults [i.e. parents, teachers, or counselors] who see such discontinuity as a problem will find the individual's need to accept predicament intolerable and will provide an adult chosen goal and prescription for closing the gap between goal and present actuality by ritual means. Only adults who can see goal and actuality discrepancies as predicament will be able to help the individual by communicating expectation that goal predicament is to be recognized and analyzed. For adults to advocate the bearing of predicaments by youth is unseemly these days, however, when it is popular and supposedly professional to ease the burden of discontinuity in personal development by allaying anxiety.

I presume the counselor's dilemma is obvious in these circumstances. He must expect his charges to develop in their capacity to bear goal predicaments; he must do so in ways such that his society does not brand him as sadistic. But, the tough-minded expectation that confronting goal predicament fosters personal integration is in fact nurturant; a counselor's predicament, to be tough yet nurturant.

Youth will not always do what we expect. However, in the absence of communication of what we expect the bearing of predicament will be determined in random, not cultivated, relation to our action as counselors.

Understanding Choice Predicament

Although goal predicament is logically grounded in choice predicament, I suspect that goal predicament emerges at an earlier developmental stage. Children initially experience adult goal setting to which they can only respond by gross acceptance or negation in the sense of "not mine." It is only later that the child begins to state alternate goals and to be allowed therefore to experience choice. Youth quite likely experience numerous expectations for goal determination within the problem situation defined by adults before they begin to differentiate choice behavior from goal pursuit. In fact, it is probably the capacity to bear adult problems as predicaments rather than problems which gives rise to choice predicament at all.

Developed conviction that one's life is somewhat personally determined is the outcome of development of the capacity to bear choice predicaments. The developed conviction that a goal can be personally attained is the outcome of development in the capacity to bear goal predicaments. Therefore, the capacity to bear goal predicaments obviously spawns, but does not itself mature, the capacity to bear choice predicaments. The capacity to bear choice predicaments involves an understanding of paradox in life even more fundamental for goal pursuit than is the mastery of the paradigm of purposeful action.

Recognition of Choice Predicament. The circumstance in question in choice predicament is not the goal; it is choice itself. At the most rudimentary level of analysis every situation that can lead to action can be conceived as having the inherent possibility of refusal to action. Choice predicament becomes conscious when the individual learns to recognize that for every commitment demanded, he has the right to reflect on whether he will make the commitment. To respond automatically to external demands and fail to recognize the choice predicament inherent in all demands leads one either to deny that actions can be responsible or to ascribe all responsibilities to "others." From this basic choice, i.e. that for every affirmation there is the responsibility to consider negation, the "not mine" choice predicament is further enriched when complex alternative choices are available for consideration. The predicament here is that choosing A means rejecting B, even though both A and B are equally appropriate, at least temporarily, if not permanently. This inevitability is what gives to all choice the inherent quality of predicament. Recognition of choice predicament starts when affirmation through commitment and action leads to recognizing the possibility of negation or alternative choice through reflection.

Analyzing of Choice Predicament. The analysis of choice predicament is geared to the question of individual responsibility for commitment and implementation. Recognition of the inclination to avoid responsibility for choice through automatic-like commitment to action without having reflected on alternatives leads to analysis of choice predicament. Although it is possible that reflection on commitment, action, and anticipated goal does not result in recognition that alternative commitments, actions, and anticipated goals were present at the point of initial action, it is unlikely that the awareness of the predicament of choice can be avoided.

Analysis of choice predicament then requires that the individual bring both reflection and tentativeness to focus on the future as if commitment and implementation were to be personally delineated in some small way. If such reflection and tentativeness leads the individual to maintain his lack of responsibility for goal or action, whether these be modified or unmodified, then we should recognize this as choice problem, a situation to be resolved rather than a choice predicament, a situation to be responsibly tolerated. When reflection and tentativeness have made it clear that choice is always present, it is the maintenance of a posture of choice about the future that leads to the recognition of choice predicament as a condition of life and to the role that tentativeness and reflection in choosing can have in leading to personally determined, new commitments/actions.

Expecting Choice Predicament. The bearing of choice anxieties as well as goal discrepancies as predicaments rather than problems poses predicaments and problems for counselors as has already been noted. Counselors must expect - yes even cultivate - choice anxiety if citizens are to be helped to experience choice as predicament, not problem.

I believe that education is a socially sanctioned context in which the cultivation of choice predicament can take place. However, there is a logical fallacy inherent in the cultivation of choice predicament if all aspects of the cultivation are practiced by teachers in the absence of collaborative support from counselors. Therefore before considering applications of predicament in life and counseling psychology

I next speak to the social context and organization necessary to cultivate humanness and potency in man with minimum danger to his freedom.

Predicaments and Education

I have argued (Chapter 17) that education which cultivates the capacity to act towards states and properties, i.e. external realities or an authority's representation of them, with the expectation that one can effectively modify a relationship to those states and properties in a desired and specifiable direction requires an organization for education in which teacher and counselor must come into complimentary relationship. In short, I believe that it takes both a teacher and a counselor to educate for responsibility and freedom. My argument starts with realization that responsible freedom arises within a context of collaborating initiatives (the teacher's and the student's) in which the student is expected to cultivate understanding of his personal initiative. Basically the student is expected to be responsible for his knowledge and his actions. Education should be organized with both teacher and counselor in order that we adults may both teach the student how to do just this and give him confidence in doing it.

The structures which I have previously delineated as those undergirding a realization of responsible freedom within the framework of education are assimilation, authority, and responsible action. The educational goals which I delineate as crucial to a developed capacity for responsible freedom are accuracy, discovery, insight, and self-as-process. I suggest that a pedagogy bridging accuracy and discovery should emphasize understanding of the means for discovery. The pedagogical bridge between discovery and insight should be cultivation of the realization that insight can be nothing but personal. Finally the pedagogy bridging insight and self as process should cultivate the student's confidence and capability in his capacity for insight. Such cultivation brings about understanding, and usually even appreciation, of the student's capacity to deal in, and with, the present in order to realize presently desired future states for self and for relation of self to others and their environments.

In my recommended organization of effort counselor and teacher share equal interest in the pedagogy which brings about realization that insight is personal. However, the teacher has to be primarily responsible for the pedagogy bridging accuracy and discovery; the counselor primarily responsible for the pedagogy bridging insight and self-as-process. Otherwise the structure of authority does not ordinarily differentiate adequately from the structures of assimilation and responsible action.

I have little patience with novelists, educators, psychiatrists, psychologists, sociologists, government officials, or citizens who attempt to resolve the specialization I prescribe for teacher and counselor by a unifying "systems" approach. The specialization I prescribe is justified if on no other grounds than the grand ground of liberty. Responsible freedom is a predicament. It is the predicament of being "good" and being one's self. It is a predicament just like that between commitment and tenativeness, implementation and reflection. A predicament is not to be resolved; a predicament can only be confronted, perhaps even to be appreciated by those who learn to claim the confirmation of self that comes through such confrontations. To be confronted, a predicament must be experienced; it must be analyzed; it must be practiced in expectation of confirmation; it must be practiced in conditions for supervision and discussion. Therefore, in order for the predicament of responsible freedom to be experienced within a desirable framework for education, teacher and counselor must be specialized as I prescribe. To erase this specialization is to risk dehumanization in the name of education.

The basic curriculum in this prescribed framework for education must be that of decision-making. The process of discovery is basically that of decision-making. The process of insight is basically that of coming to an understanding of, and belief in, states and properties, events and processes, sufficient for accomplishment before the act, event, or relationship exists. This is the process by which crystallization, choice, and clarification occur in decision-making (see Tiedeman and O'Hara, 1963). Finally, the capacity to experience self-as-process involves the developed capacity to act from a decision frame in an effort to realize an intended aim. If a person carries the decision-making framework in his mind so that he can reflect upon his actions in relation to his intentions and their effects, he has achieved the responsible freedom which I advocate He can live the paradox of predicament in choice and goal, namely be committed and tentative.

Applications in Life

Decision-Making and Career Competence. Vocation is but a sub-realm of man's intentional and attitudinal activities. It is possible to bring this fact to man's attention if vocation matures interactively with a framework of education essentially possessing my prescribed dimensions. The prime requisite for bringing understanding of this fact into man's intentional and attitudinal framework is the developed capacity to experience self-as-process. Emergence of understanding of the predicament inherent in vocational competence and occupational competence (Morley and Tiedeman, 1966) best arises in a context of education and work in which responsible freedom is expected in both. When a person can act toward the predicament of vocational competence and occupational competence so that he can both work and not work, he has attained a modicum of career competence. (The ISVD outlined in Chapter 12 will have this intent.)

Predicament and Vocational Rehabilitation. Persons in need of vocational rehabilitation have physical restraints within which goal and choice predicaments must be borne. Although those restraints are regrettable, rehabilitation counselors cannot permit their clients to let regret for physical limitation obliterate development of their capacity for bearing goal and choice predicaments. The task of the vocational rehabilitation counselor may be more circumscribed by possibility as a result but it is certainly not different in its essential nature from the task of the ordinary counselor. In view of this fact, it is regrettable that vocational rehabilitation is not more firmly embedded within educational frameworks than is now the case.

Paradox and Mental Health. I obviously believe that the developed capacity to bear goal and choice predicaments represents the full expression of man's humanness and potency. Therefore, I believe that persons with such developed capacity are mentally healthy. In fact, I also believe that they are as well fortified as they can be against mental illness, the problem side of choice predicament. In view of these beliefs, it is also regrettable that the resources for effectively fostering this ultimate expression of personality which I advocate are socially and professionally relegated to the role of problem resolution associated with hospitalization and mental rehabilitation in community mental health clinic rather than being actively promulgated in our educational frameworks where they can further cultivate goal predicament once choice problem is resolved.

Application: The Predicament of the Division of Counseling Psychology

Now let's apply the concept of predicament to counseling psychology.

In indicating my purpose at the start, I noted that three conditions form the essentials for cultivation of capacity to confront the predicament inherent in being both tentative and committed toward goal and choice, in both reflecting upon and implementing attainment of goal and choice. The essentials were: 1) mental capacity sufficient both to act and to think upon action; 2) education for understanding and appreciation of predicaments; and 3) the expectation that understanding of the predicament of tentativeness and commitment will be used throughout adult life. I have just stated my belief about the aid to confrontation of predicament which can come from coordinated consideration of the counseling psychologist's particular concern for competence in decision making. I want to consider in conclusion our responsibility as counseling psychologists to project to public and students the expectation that confrontation of the predicament of tentativeness and commitment will be used throughout adult life.

During my tenure as president of the American Psychological Association's Division of Counseling Psychology, I have twice asked if this is not the time to re-form ourselves into a Division of Guidance Psychology. I seem not to have raised much response. My fellow members of the Division of Counseling Psychology seem impervious to the question. Perhaps they do not see the same risks for Divisional survival as I do.

It is because I see these risks that I have undertaken this lengthy statement.

Since 1955, the Division of Counseling Psychology has managed to monopolize the technique of counseling. In doing so we members have managed further to perfect, at a rate probably more rapid than might otherwise have existed, our consideration of the counseling technique itself and of the method of science appropriate to that technique. However, we have at the same time been losing our interest in defining goals for our society. Furthermore, I think we have even diminished our own professional capacity to help others to define goals for themselves.

The facilitation of the capacity for choice, goal definition, action, and understanding of goal-forming procedure requires the presence of the counselor in a system in which choice and goal-directed behavior is expected. Education is such a natural system. In education our goal is guidance; our technique, among others, is counseling. Unfortunately, we counseling psychologists are presently not very deeply embedded within the framework of education as I have just noted in the previous section.

In planning for an Information System for Vocational Decisions, I have deliberately tried to free the counselor from obligation to know and to convey facts/data about occupations, vocations, and careers. At the same time I have attempted to put great professional responsibility on the counselor for seeing to it that a user attempts in turn to engage himself in relation to those facts/data so that he, the user, turns them into information. Furthermore, I have attempted to give the counselor even greater professional responsibility for judgment and action for cultivation of that relationship. Surely guidance-like tasks will constitute the job of the future counselor. We can either begin to adapt ourselves to this future which I think is bound to come in education, vocational rehabilitation, and community mental health clinic, or we can remain interested in just monopolizing the technique of counseling.

If we remain interested only in monopolizing the technique of counseling, I think that the future of the Division of Counseling Psychology is indeed limited. In fact, if we persist in our present course it would not surprise me if the Division disbands in several years. By then, the American Psychological Association would probably have numerous other divisions which would draw the main interest of most of our present members.

On the other hand, if we were to enlarge our interests and incorporate into our organization the goal I have here attempted to delineate for us, I think that we will enter upon a new period of growth. We will be able to help students better. We will be projecting a goal and program of great individual worth into our society which basically needs the development of individuality. Finally, we will be helping ourselves by taking unto ourselves a task of considerable uncertainty but great worth. These are conditions for our growth, not death.

Time for a Division of Guidance Psychology? (Sorry, once again, about that, old members. However, to hell with old members. Any new members?)

APPENDIX A

PART I. THE OPERATIONAL SPECIFICATION OF IDEAL PURPOSEFUL ACTION

(Prepared by Frank L. Field, Sept. 1963)

The paradigm of purposeful action contains four basic functional aspects:

1) The currently experienced situation (the CE);
2) the (concept of a) currently desired (future) situation (the CD);
3) the planned/expected situations and events lying between; and
4) a feedback mechanism.

The basic premise was that the amount and quality of information contained in each of these categories will affect the selection of individual adaptive success. To maximize these chances, the following general criteria must be met;

1) The CE must be comprehensive and accurate with regard to the states and properties of things;

2) the CE must include a sense of process, an awareness of the course of events, of change, sequence, and timeflow;

3) (1) and (2) must be integrated to form extrapolations or predictions of alternative future outcomes that are possible;

4) one or more of these alternatives must be integrated to form a concept of self-acting-in-a-future-situation that is/will be both possible and pleasant;

5) on the basis of this goal, a plan must be evolved in order to specify an expected course of events most likely to lead to achievement of the goal;

6) this prediction, of events or situations having the greatest likelihood of leading to the desired goal, provides the basis for a feedback system to operate;

7) this feedback system can serve to affect future events by guiding the individual's choice of current action; actions are chosen continually to reduce the difference between observed events and the previously established expected course of events:

8) to assure (7) requires that all previous aspects exist to some degree, and in addition, that the individual be aware that choice

of actions in the present can affect the relative likelihood of various future alternatives (a "sense of agency").

The evolution of purpose from information and feeling

Described in terms of what behavior would be like when they were met, these requirements serve to define criteria by which an individual's overt actions can be evaluated and/or compared with one another. The following are more specific properties of such "ideal" functional aspects, as derived from the hypothetical process by which a choosing mechanism is evolved.

1) A comprehensive and accurate CE would include valid information regarding
    A) current states and properties
        a) of self
            I) positive and negative needs (in the life or death sense)
            II) likes and dislikes (in terms of pleasure-pain)
        b) of situation - environment
    B) the facts of process and time sequence
        a) the current structure and course of events
        b) past outcomes of similar courses of events in situations with similar states and properties.
2) The information contained in such an ideal CE can be used to predict alternative future events, situations, and personal or environmental states-properties. Such use involves extrapolation; the continuation - via abstract thought - of existing conceptual patterns.

Thus

- A) states-properties of the participants in current events are assessed and categorized as
  - a) unchangeable
  - b) possibly changeable but by factors not subject to control
  - c) subject to change if some feasible action were performed.
- B) Patterns underlying the current course of events are also assessed and categorized as
  - a) constant, inevitable
  - b) subject to change by factors not known or controllable
  - c) subject to change if some feasible action is performed.

3) One or more of such anticipated future situations can be assessed as

- A) possible in the environment,
- B) meeting the probable future requirements of the environment,
- C) both adaptive and desirable for the individual in terms of his current nature,
- D) adaptive and desirable for the individual in terms of his probable future nature.

This process of extrapolation produces a goal, a "current concept of a desired future state."

4) Once a goal (CD) exists in addition to information regarding the present (CE), it is possible to evolve a plan. A plan consists of a series of predicted events that would be more likely to result in achievement of the goal. Such events must be

- A) inevitable, and/or
- B) probable though beyond control, and/or
- C) subject to control by the individual's actions.

5) Such an "expected course of events" provides the basis upon which a feedback mechanism can operate.

   A) It provides information regarding the current situation and course of events expected to result in progress toward the desired goal.

   B) It guides the choice of actions to bring the actual situation closer to the expected/planned situation.

The characteristics of purposeful behavior can now be described in more simple terms: *i.e.*, in terms of information the individual must possess and use for the selection of actions.

CE:

He must know what he needs (and needs to avoid).

He must know what he likes (and dislikes).

He must know what the immediate situation absolutely requires (and prevents).

He must know what the immediate situation permits (and resists.)

He must be aware of events;

that they take place,

that they are organized to varying degrees,

that common patterns of organization underlay many past events, and

that these patterns provide bases for better-than-chance predictions of future events and situations.

CD:

He must predict his needs, his likes, the requirements and pressures of the environment, and use these to select a favorable alternative system as his goal.

Plan

He must have developed the concept of a series of future events

that will occur, and/or

that will probably occur, and/or

that he can bring about,

and these must be likely to result in achievement of his established goal.

Feedback:

He must continually assess what is actually taking place.

He must compare this observed pattern with the planned or expected pattern.

He must choose actions to reduce the difference, or

He must revise the plan and/or the goal.

Hypothetical Dimensions Underlying Information Defined by the Paradigm

The foregoing list of necessary information suggests certain underlying characteristics - in effect, the beginnings of a simple scoring scheme applicable to specific choices. For example, a particular individual's CE, CD, and/or Plan might be

comprehensive or narrow in scope,

full or fragmentary with regard to detail,

accurate or inaccurate,

focused upon states and properties or upon processes, or both.

In addition to these common sense characteristics, however, there are more complex dimensions suggested by the paradigm. The individual's reports or actions might reflect over or under emphasis upon past, present, or future

self-structure, environmental structure, or their
overall relationship

what is expected with some certainty, what is only
hoped for or feared (passively or helplessly), or
what can be caused or prevented (by feasible actions).

These hypothetical informational dimensions provided a partial basis for the scoring scheme presented in Appendix A, Part II. However, the first attempts to apply it to data proved difficult; the scheme appeared to measure only positive "degrees of idealness" in terms of the paradigm. Consequently a second and negative approach was added, and it is this negative approach, _i.e._, to the absence of idealness, which specifies the scales outlined in Appendix A, Part II.

PART II. DETAILED SCORING OF MALFUNCTIONS IN PURPOSEFUL ACTION IN RELATION TO JUSTIFICATION OF VOCATIONAL CHOICE

(Prepared by Frank L. Field, Sept. 1963)

1) Group membership

   1 Goal, plan, accuracy, and confidence
   2 No goal but awareness of process and confidence in self
   3 "Acting for the moment" but with goal vaguely in mind
   4 "Triggered" automatic reactions to vocational choice
   5 Extreme case of empty or hollow goal or plan

2) A goal is

   1 Clearly present
   2 Ambiguous data
   3 Clearly absent

3) The goal is almost entirely

   1 Positive, to get
   2 Absent, ambiguous data, or balanced
   3 Negative, to avoid

4) The expressed desire regarding the future primarily involves

   1 Doing, acting or functioning; a process is anticipated
   2 Concept absent or ambiguous data
   3 Being, having, appearing to be; a state or property is anticipated

5) The goal is

   1 Specified by occupational title or job category
   2 Specified by a distinct function, level, or major characteristic, but two or more jobs may be under consideration
   3 Absent/ambiguous data
   4 Poorly specified; there may be mutually exclusive jobs (in terms of prerequisite training or capacity) functions, or levels under consideration
   5 Diffuse, constantly changing in rapid and/or extreme fashion; may be "labile" or diffuse

6) The concept of (one or more) desired future situation(s) is

   1 Accurate
   2 Absent/data ambiguous
   3 Distorted

7) The concept of (one or more) desired future situation(s) is

1 Reasonably comprehensive (i.e., has potential value for guiding choices of those instrumental actions that will be necessary)
2 Absent/ambiguous data
3 Fragmentary, consisting of aspects or characteristics of the situation

8) The goal gives the impression of being

1 Flexible, subject to reconsideration
2 Absent/ambiguous data
3 Rigid, fixed, no longer under consideration; it may be a longstanding "triggered" or obsessive choice

9) The goal gives the impression of being

1 Strongly desired
2 Absent/ambiguous data
3 Undesired, implanted, "hollow"

10) Criteria for goal-selection tend to be

1 Overtly stated and/or clearly within awareness
2 Absent/ambiguous data
3 Outside awareness

11) A sense of agency, of power to affect future outcomes or events, (is)

1 Clearly present
2 May be present because it is implied in plans, goals, and/or actions
3 Ambiguous data
4 Seems to be lacking
5 Clearly lacking

12) There are strong specific doubts, a sense of extreme pessimism about capacity to meet some requirements, (such as college, a specific subject, or the need to study)

1 Clearly present
2 Ambiguous data
3 Absent (there may be realistic concern or awareness of difficulty, however)

13) The individual's current experience or situation appears to be

1 Liked
2 Ambiguous data
3 Disliked

14) The individual sees his own characteristics -- capacities, needs, desires -- as being

1 Fixed; the same now and in the future
2 Concept absent or data ambiguous
3 Subject to change over time

15) The choice appears to be based upon experience

1 In the actual work
2 In a related activity
3 Not based on experience, or ambiguous data

16) "Motivation-Search"

1 Overt statement that "you have to like the process of working"
2 Implied (1)
3 Concept absent or data ambiguous
4 Longstanding, obsessive choice; liking not considered (overtly)
5 Overt statement that "you don't have to like work"

17) Seeking "Certificate of Competence or Worth"

1 Yes
2 Probably
3 No/ambiguous data

18) Aspirations vs. Expectation

1 Highly incongruent (aspiration much higher level)
2 Incongruent (aspiration higher level)
3 Identical

It should be noted that these seventeen scores were established by sorting the interview thirteen times, all without reference to the overall evaluation. Yet each variable (except number 15) reflects a clear "desirable-undesirable" dimension.

APPENDIX B

PART I. UNDERSTANDINGS NEEDED FOR PREVENTION OF CLAIM THAT SYSTEM DETERMINES LIVES

I. Limits on counselor

- A. Only places person in a condition of readiness for entry into discontinuity
- B. Uses personal history in prior discontinuities to bring about readiness as in A
- C. Recommends about curriculum in order to help in A
- D. But does not progress with the person into the next discontinuity

II. Limits on System

- A. System provides only facts/data
- B. Facts/data must be as accurate as possible
- C. Facts/data must be up-dated as much as possible
- D. Projections of future must be entered and used in responsible ways
- E. Bases for facts/data and projections must be transmitted as feasible
- F. Applications transmitted by the System for the person must be in good taste and responsive to the wishes of both parties involved
- G. Personal data must be kept confidential
- H. Personal data must be de-personalized when later used in improving the System
- I. Only the person is responsible for goals, plans, and clarifications achieved through System no matter what the heuristics may be which the System created for the person

PART II. PRELIMINARY SPECIFICATIONS FOR DATA AND ROUTINES

I. Provide material for each of four contexts - education, armed service, occupation, other

II. Provide *grades* of specificity and reality in each context

  A. Perspective (visual with auditory but arranged in panoramic perspective, *i.e.* show a whole manufacturing process, a whole military operation)

  B. Specific

    1. Provide for focus upon elements upon demand from person (still visual with auditory but arranged so specific emerges as foreground from background of perspective)

    2. Provide for presentation of occupational information (somewhat in the style of the Occupational Outlook Handbook)

    3. Provide for simulation

      a. Note needed decisions

      b. Invite play against machine, e.g.

        1) Selling (what's it like to miss a sale nine times in a row)

        2) Managing a company (provide difficulties in having authority and responsibility)

      c. Have machine always explain bases of its wins (If you wanted ____, you should have done ______.)

    4. Visits for observation with discussion (*i.e.* get the feel of the *people* at work)

    5. Supervised practice - analysis, criticism, and revision of the practice of being intentional
    6. Supervision of revisions of patterning of time use in life styles

III. Routines required for the computer - provision of heuristics for the mastery of purpose in action through repeated analyses of personal history and present desires

  A. Heuristics for analysis of the aspect of adjustment (Tiedeman and O'Hara, 1963, pp. 43-45)

    1. Encourage person to create an account of his experience with his most recent discontinuity in terms *remembered* as expected prior to entry upon the discontinuity - memories of prior anticipation
    2. Review account in 1 and query to ascertain person's indentification of steps of
      a. Induction
      b. Reformation
      c. Integration

      (See Tiedeman and O'Hara, 1963. Program should largely probe for attitude *toward* the pursuit of intent in the *social* context met in the experience of the discontinuity)
    3. Call up previous record of anticipation of the discontinuity
    4. Encourage comparison of 1 and 3 for identification of differences
    5. Query with regard to differences to create heuristics for elaboration of the bases of differences
    6. Elicit statements of opinion about one's person in terms of abilities, interests, and values given 5.

7. Call up previously stored objective observations in terms of abilities, interests, and values
8. Compare 6 and 7 (e.g. O'Hara's self concept indexes) for identification of possible differences
9. Query with regard to differences offering the person the option of calling for new testing of himself in order to determine if he has changed the previously stored objective conditions
10. Repeat 1-9 for next earlier discontinuity than one now in consideration and hence being entered into record
11. Repeat 10 for other previous discontinuities if desirable and possible
12. With 10 and 11 encourage person to prepare an up-dated statement of his life context
13. The emergence of higher order conceptions which have consistency with prior specifics but offer alternatives not previously available constitutes the structure (Bruner, 1962) of the personal history. This structure constitutes the self-concept system in relation to the person's exercise of intent. [Refer to list of Super's self-concept system variables (Super, et al., 1963) for suggestion of some of the terms in which this structure can be discussed in assessment, personal or otherwise.]
14. Store new statement of personal structure

B. Heuristics for analysis of the aspect of anticipation (Tiedeman and O'Hara, 1963, pp. 38-43)

   1. Heuristics for exploration - learning how one translates think/do (i.e. the widening of one's awareness of his pre-conscious experience and processes)

B.5

a. Primary terms

   1) Abilities - what I *can* do

   2) Interests - what I *like* to do

   3) Values - what I *will* do

   4) Future - what *others* presently think it *will be like* at specified times ahead

b. Heuristics for future

   1) Primary terms will have to be concepts and ideas

   2) Heuristics will emphasize the invention of uses for ideas (*i.e.* the program will need to be one of translation)

   3) Uses offer alternatives

   4) Alternatives permit some specification of consequences

   5) Consequences permit some specification of potential barriers

   6) Potential barriers permit estimation of economic and personal cost

   7) 1-6 permit anticipation of what is likely to occur and what will be required to make it occur

   8) Suggest selection of duties for one's self in relation to 7

   9) Suggest translation of possible future duties as in 8 to today's alternatives (we will need to provide *the language and translation* for linking education, work, and armed service through education and development)

c. Heuristics for linking future and abilities, interest, and values
    1) Translate abilities, interests, and values into present alternatives after review of personal history
    2) Encourage statements of linkages of think/do
    3) Highlight awareness of personal investments of time
    4) Attempt widening of areas of personal activity
    5) Attempt linkages of opportunities to actions given abilities, interests, and values

    [Refer to list of Jordaan's exploration variables (Super, *et al.* 1963) for suggestions of some of the terms in which exploration can be discussed in assessment, personal or otherwise]

2. Crystallization (e.g. a step in making pre-conscious become conscious)
    a. Suggest alternatives
    b. Encourage personal imposition of ordination upon alternatives as provided and as personally augmented
    c. Encourage realization of exclusions
    d. Encourage realization of bases for exclusions
3. Readiness for planning (*i.e.* making intentions efficient)
    a. Start with *chosen* activities
    b. Test for relevant facts
    c. Supply missing facts
    d. Provide for review of choices (*i.e.* for return to programs B.1 and/or B.2 and/or B.3)
4. Readiness for clarification

a. Seek listing of needed next activities

b. Promote the sequencing of activities

c. Prompt to evolution of evaluation system (*i.e.* for listing of contingencies and for means of assessing in order to choose as contingencies become definite)

d. Encourage linking of assement in contingencies to potential revisions of goals and/or means of attempting to secure goals.

B.8

PART III. PROCEDURES FOR IMPLEMENTING THE MAKING OF VOCATIONAL DECISIONS

(Adapted from Notes of 8/20/65 & 8/24/65)

Warren D. Gribbons

Regis College

The procedures should reflect the facts that vocational development takes place within physical, educational, and occupational frames. Therefore, the materials should provide for distinctions in at least the following levels of the educational frame (other frames are generally coordinate in development with the educational and may therefore prove unnecessary):

1. Kindergarten through Grade 3
2. Grade 4 through Grade 6
3. Grade 7 through Grade 9
4. Grade 10 through Grade 12
5. Grade 13 and Grade 14
6. Grade 15 and Grade 16
7. Grade 17
8. Grade 18 and beyond

At the present time, specifications are not complete for any level nor inclusive of all levels.

The specification of needed procedures are organized according to the above levels within the following categories:

Part A - Responsibilities of Teachers

I. Cultivation of machine use, problem-solving mode, and knowledge of possibilities for influence of restraints on personal desires

Part B - Responsibilities of Counselors

II. Cultivation of personal responsibility - the emergence of self

III. The influence of the past on the future - aptitudes, accomplishments, interests and values in relation to educational and vocational choices

IV. Choice, clarification, accommodation, and progress in educational frames

V. Exploration, choice, clarification, accommodation, and progress in relation to work frames

Part A - Responsibilities of Teachers

SECTION I. CULTIVATION OF MACHINE USE, PROBLEM-SOLVING MODE, AND KNOWLEDGE OF POSSIBILITIES FOR INFLUENCE OF RESTRAINTS ON PERSONAL DESIRES

Kindergarten - Grade 3

A. Introduce machines and instruct in their use

1. Begin with simple familiar machines--dials, typewriters, etc., and advance to more complex, productive machines

2. Refer to Section V, Kindergarten - Grade 3

B. Initiate rudimentary problem-solving behavior

1. Game approach similar to that used for reading readiness e.g. large board with picture problem (probably showing person at work)--respond to questions: What? Where? How? Why?

2. Emphasize use of questions:
"Why do I?" "How did I?" "How could I?"

3. Toward end of third grade initiate "case method" closely tied to youngster's own needs
e.g. "Peter faced with studying lessons or going out to play," should encourage youngsters to consider many factors before making decisions

Grades 4 - 6

A. Continue instruction in problem solving with special emphasis on school, home, neighborhood

1. Present additional case studies to increase awareness of factors to consider in making decisions; with particular attention to alternatives influenced by different abilities, interests, and values

2. Pre-You: Today and Tomorrow-type book
Know self-abilities, interests, values
Intellectual and emotional involvement with personal-social materials

B. Also refer to Section V, Grades 4 - 6

Grades 7 - 9

A. Continue instruction in problem solving

1. Broaden to state, national problems e.g. political, conservation, etc.

Grades 10 - 12

A. Curriculum Implications

1. Special emphasis on personal development in e.g. civics or economics courses

a. Changes can be obtained through personal action

b. Changes can be obtained by changing laws--minimum wages, hours per day and per week, etc.
Difficult especially with lower socio-economic groups, but may be possible through involvement in "doing", i. e. personal visits to legislature, etc.

Part B - Responsibilities of Counselors

SECTION II. CULTIVATION OF PERSONAL RESPONSIBILITY - THE EMERGENCE OF SELF

Kindergarten - Grade 3

A. Instruction and supervision in "How to Study"

Grades 4 - 6

A. Cultivate me-they relationship

1. Show how people affect one another
   I affect you.
   You affect me.
   We affect them.
   They affect us...and all of these relationships affect our decisions.

Grades 7 - 9

A. Awareness of think-act dichotomy---Continue "Know Self"

1. You: Today and Tomorrow-type book

2. Readiness for Vocational Planning-type instrument for computer (see Cogswell and Estavan, 1965)

3. Self Concept Index for computer use

B. Emotional involvement plus intellectual involvement

1. Counselor must be available to help clarify youngster's understanding of facts/data so he can transform them into information

2. Counselor must be available to assist youngster through traumatic emotional experiences when and if they occur. Machine might inform: "Medical doctors usually hover in the first quartile scholastically." I want to be a doctor but I am in the third quatrile. I may even have trouble getting into college, and my father wants me to go to his school.

C. Encourage taking of personal responsibility for choices

1. You: Today and Tomorrow-type book

Part B - Responsibilities of Counselors

SECTION III. THE INFLUENCE OF THE PAST ON THE FUTURE - APTITUDES, ACCOMPLISHMENTS, INTERESTS, AND VALUES IN RELATION TO EDUCATIONAL AND VOCATIONAL CHOICES

Kindergarten - Grade 3

A. Create records for individual use in future feedback

1. Test data
2. Educational and vocational interests and aspirations

Grades 4 - 6

A. Continue testing program and add to private records

1. Use Readiness for Vocational Planning-type procedure with its possibility for instant feedback--adapted for machine use (see Cogswell and Estavan, 1965)
2. Counselor assessment--possibly through counselor's monitoring 20-30 consoles and then informing youngster (through machine system) of factors he is failing to consider in making decisions

Grades 7 - 9

A. Continue testing program and add to private records for feedback

Grades 10 - 12

A. Continue testing program and increase ability to use resources

1. Add to private and public records (U.S. Employment Service Test, etc.)
2. Encourage realistic appraisal of test scores
3. Develop awareness of present-future relationship
4. Provide opportunities for youngster to review all data in

his "private bank"

B. Continue to stress realistic appraisal of abilities, interests, and values; and need to take personal responsibility for choices

Part B - Responsibilities of Counselors

SECTION IV. CHOICE, CLARIFICATION, ACCOMMODATION, AND PROGRESS IN EDUCATIONAL FRAMES

Grades 7 - 9

A. Concentrated instruction on curriculum choices--EARLY!

1. Thorough acquaintance with curricula available
    a. Relationship of subjects/curriculum to occupations and future education (see Cogswell and Estavan, 1965)
    b. Requirements for success in various curricula
2. "Off to School" "Off to Work" -- movies, cartoons, booklets

Grades 10 - 12

A. Development of college-orientation

1. Bring to awareness need to specify college preference
2. Information on how to obtain entrance to college
    a. Early plans for CEEB's
    b. Machine to match private data with bank of data available on colleges; i. e. match capacities and needs of student to requirements and offerings of specific schools
3. Information on great range of different types of schools, e.g. Jr. Colleges, Four year schools, etc., but also specific information on many schools of type finally selected--not limited to either local or distant schools
4. Provide link for self responsibility in study
    a. College-type lecture course with particular attention to note taking
    b. Responsibility in doing assignments--chapter assignments to be completed on schedule

Grades 13 - 14

A. Development of college-orientation

   1. Provide intense period of self exploration with emphasis on linkage of study to future world of work

      a. Relate abilities, interests, values, and hoped for style of life to occupations open to graduates of different courses and programs. Consider the future.

   2. Emphasize need to compromise in decision making, i. e. awareness of risks, rewards of involvement in moving toward ideas, which is implicit in the change

   3. Involve students with machine system for choice of job following graduation

   4. See Section V., Post High School and College, A. Progression in Work-Orientation

Part B - Responsibilities of Counselors

SECTION V. EXPLORATION, CHOICE, CLARIFICATION, ACCOMMODATION, AND PROGRESS IN RELATION TO WORK FRAMES

Kindergarten - Grade 3

A. Bring within child's awareness the kinds of jobs in his neighborhood, and then expand horizon beyond those with whom he comes in direct contact

1. Game approach
   Pupils and/or teacher suggest occupation for game, and all contribute as much information as they have about it. When this source of information is exhausted, teacher (later pupils) will go to machine and plug in for film strip, movie, etc., which will be prepared specifically for a particular age group.

Grades 4 - 6

A. Broaden occupational frame of reference

1. Introduce new occupations to excite imagination and broaden vista using real and fictional heroes. Fantasy may be involved, but there should be some rudimentary link to reality.
   a. Use "live models" through film strips and tape recordings. Model will describe job, how and why he chose it, requirements for job (educational, physical, special aptitudes, etc.), why he likes the job, and any special satisfactions he achieves. In addition, his spare-time activities and home should be described or shown. (also cartoons, pamphlets)
2. Emphasize time, distance, compromise, money, and planning involved in achieving goals
3. Illustrate impact of job preference to "style of life"(see 1-a above)
4. Stress relationship of school subjects to specific occupations with special instruction on available curricula.

B. Provide facts/data on preparation for neighborhood jobs (use familiar to stress preparation, delay to get)

C. Encourage process of crystallization

   1. Face-to-face conferences with counselor who could help youngsters become aware of alternatives, consequences of his acts (to the extent that he has failed to gain this information through use of machine or has failed to interpret the data properly)

Grades 7 - 9

A. Occupational facts/data

   1. Emphasize future projected manpower needs and occupational patterns

      a. e.g. skilled trades will diminish with automation

   2. Reports of recent graduates--heroes and drop-outs (on tape, personal appearances)

   3. How to get work

Grades 10 - 12

A. Occupational facts/data

   1. Move from general to specific plans

      a. Bring awareness of need to specify vocational preferences

      b. Stress timing, responsibility, and urgency

   2. Detailed, specific instruction

      a. How to obtain entry job

      b. How to apply to college

B. Development of work-orientation

   1. Move from general to specific plans

SECTION V. (continued)

a. Bring awareness of need to specify vocational preference.
   Stress timing, responsibility, and urgency.

b. Information on how to obtain entry job

c. Provide linkage of educational background to work qualifications. "On basis of past history, what am I qualified for?"

d. Input of "Help Wanted" advertisements into system--translate possibilities to immediate opportunities for self

e. Inform about relationship to fellow workers as well as superiors

Post High School and College

A. Progression in work-orientation

1. Securing entry job

   a. Opportunity to check private information against public information to alert to:

      1) Opportunities open to person with his qualifications

      2) Possibilities for advancement, projected salaries, "style of life" in specific occupations

      3) Possibility for person to release resume if he wishes

2. Crystallize transformation from occupation to job, and later to position

   a. Person must take responsibility for moving in direction of position (sense of agency)

   b. Assemble records of past achievements and realize there is freedom of choice

   c. Person must realize crucial link is promotion and he has freedom to determine this for himself

SECTION V. (continued)

        1) Promotion within same company in same type of work

        2) Change type of work within same company or with other company, possibly involving change in level

        3) Promotion through movement of location

3. Continue Readiness for Vocational Planning-type self-assessment

4. Use technique of simulation to help experience change and new affiliations. E.g., movies showing different levels of responsibilities and the accompanying need for decision making and stress that will occur

5. Make person aware that at least two types of stress will occur

    a. Stress on himself through self-understanding

    b. Stress from society through responsibility

6. Make person aware of contingencies involved in change

    a. Possible sacrifices involved in choice
    risks, sorrows, joys involved in change
    e.g. change in level may bring higher salary, but less leisure time to enjoy material advantages of greater income

APPENDIX C

PART I. THEODORE KROEBER'S "EGO MECHANISMS" (KROEBER, 1963)

A. Characteristics of defensive ego behavior

1. Rigid, compelled, channeled, perhaps conditioned
2. Pushed from the past
3. Essentially distorts the present situation
4. Involves a larger component of primary process thinking and partakes of unconscious elements
5. Operates as if it were necessary and possible wholly to remove disturbing affects; may involve magical thinking
6. Allows impulse gratification only by subterfuge or indirection

B. Characteristics of coping ego behavior

1. Flexible, purposive, involving choice
2. Pulled toward the future
3. Oriented to the reality requirements of the present situation
4. Involves a larger component of secondary process thinking and partakes of conscious and preconscious elements
5. Operates in accordance with the necessities of the individual, to meter the experiences of disturbing affects
6. Allows impulse satisfaction in open, ordered and tempered ways

C. The ego mechanisms and their manifestations

1. Discrimination: ability to separate idea from feeling, feeling, idea from idea, feeling from feeling.
   a. Defense: Isolation
   b. Coping: Objectivity

2. Detachment: ability to let mind roam freely, speculate, analyze, create, without restriction from within or without.
   a. Defense: Intellectualization
   b. Coping: Intellectuality

3. Means-End Symbolization: ability to analyze causal texture of experience, to anticipate outcomes, to entertain alternative choices
   a. Defense: Rationalization
   b. Coping: Logical Analysis

4. Selective Awareness: ability to focus attention
   a. Defense: Denial
   b. Coping: Concentration

5. Sensitivity: in direct relationships, apprehension of other's often unexpressed feelings or ideas.
   a. Defense: Projection
   b. Coping: Empathy

6. Delayed Response: ability to hold up decision, to time-bind tension due to noncommitment, complexity, or lack of clarity.
   a. Defense: Doubt and indecision
   b. Coping: Tolerance of ambiguity

7. Time Reversal: ability to replay or recapture experiences, feelings, attitudes, ideas of the past
   a. Defense: Regression
   b. Coping: Playfulness

8. Impulse Diversion: ability to modify aim or object of an impulse.
   a. Defense: Displacement
   b. Coping: Sublimation

9. Impulse Transformation: ability to appropriate some energy from an impulse by disguising it through symbolization as its opposite
   a. Defense: Reaction formation
   b. Coping: Substitution

10. Impulse Restraint: ability to control impulse by inhibiting expression.
    a. Defense: Repression
    b. Coping: Suppression

PART II. DREAM REPORT FORM

Identification number:

Did you attend the last session of the group?

Date of dream:

Date of this report:

(Please describe the dream exactly and as fully as you remember it. Your report should contain, whenever possible, a description of the setting of the dream, whether it was familiar to you or not, a description of the people, their sex, age, and relationship to you, and of any animals that appear in the dream. If possible, describe your feelings during the dream and whether it was pleasant or unpleasant. Be sure to tell exactly -- that is, as best you can -- what happened during the dream to you and the other characters. Any asides, associations, comments, or observations which you may wish to offer as part of your dream report should be clearly distinguished from the dream which you are reporting -- perhaps by putting them in parentheses.)

PART III. PRECONSCIOUS MENTAL PROCESSES (KRIS, 1952)

In the 1950 paper on "Preconscious Mental Processes" Kris reconsiders the topographic distinctions which characterized the first twenty years of psychoanalytic theory. He offers a reconsideration in light of the more recently developed "structural," "economic" and "adaptive" points of view. Within this modified theoretical context Kris attempts to distinguish 1) between "mobile" and "bound" psychic energy, and 2) between two kinds of bound ego energy: (a) neutralized and (b) non-neutralized. Here Kris' subject is "the various delimitations and pathways between the id and the ego." His analysis of ego regressions (or "primitivization of ego functions") -- in sleep, in falling asleep, in fantasy, in intoxication, and in the psychoses -- emphasizes the possibility that such a process is a result of a voluntary and temporary withdrawal of cathexis from one area to another, a temporary withdrawal which enables the ego subsequently to regain improved control. With respect to this process Kris concludes:

> In ascribing to the ego the control of regression in terms of shifts in the cathexis of ego functions, (shifts) which can be related to or pitted against each other in various ways, we gain a frame of reference that each in the present tentative state of our knowledge prove useful in various ways...for example...it is generally assumed that preconscious thought processes become conscious by hypercathexis...We suggest (rather) that the hypercathexis of preconscious mental activity with some quality of energy withdrawn from the object world to the ego...accounts for some of the extraordinary achievements of mentation. Tentatively we assume that in preoccupation with fantasy the ego withdraws cathexis from some functions of the superego...It seems useful to consider in addition the possibility that the solution of problems -- including all areas of creativity -- affords pleasure through the discharge of neutral energy used in the pursuit of creative thinking...(thus) when our psychic apparatus does not actually act in search of some urgently needed gratifications we let this apparatus itself work for pleasure gain. We attempt to gain pleasure from its very activity.
>
> (pp. 313-314)

The 1952 paper, "Approaches to Art provides a general summary of Kris' thinking regarding the psychology of the creative process. He begins by restating the important, inevitable questions. "What are those things which...tend to be endowed with the specific aura which the word ART conveys? What must the men have been like who made these things, and what did their work mean to themselves and to their public?" (p. 13). He relates the contributions of Freud to later theoretical developments provided by psychoanalytic ego psychology. He clarifies further his notion of "energy neutralization" and contrasts it with Freud's original concept of "bound" energy. He suggests, in addition, that the sublimation which is characteristic of all creative activity might prove to be distinguished by two characteristics: (1) the fusion in the discharge of instinctual energy and (2) the shift in psychic levels. He then reviews the structural, dynamic, and economic changes which seem to characterize what one might call the aesthetic experience. And finally he restates in a more generalized from his central thesis:

> The shifts in cathexis of mental energy which the work of art elicits or facilitates are, we believe, pleasureable in themselves. From the release of passion under the protection of the aesthetic illusion to the highly complex processes of recreation under the artist's guidance, a series of processes of psychic discharge takes place, which could be differentiated from each other by the varieties and degrees of neutralization of the energy discharged. All these processes, however, are controlled by the ego, and the degree of completeness of neutralization indicates the degree of ego autonomy...In assuming that the control of the ego over the discharge of energy is pleasurable in itself, we adopted one of the earliest, and frequently neglected, thoughts of Freud...the suggestion that under certain conditions man may attempt to gain pleasure from the very activity of the psychic apparatus.
>
> (p. 63)

Here Kris gives clear emphasis to three major dimensions of a coherent and general statement which can provide the basis for more detailed efforts to specify processes of ego synthesis in the service of individual styles of adaptation and expression in all areas of human action. There is, first of all, his focus upon concepts of energy transformation (the "neutralization" of aggression) entailed by the "structural" point of view in psychoanalytic ego psychology. There is, second, his emphasis upon the capacity of the ego to control, to autonomously permit, shifts in level of psychic functioning over a wide range of conscious and motivational states. And there is, finally, his suggestion that the control of the ego over the discharge of energy which accompanies such shifts in level of psychic functioning is experienced as pleasurable -- his emphasis upon the intrinsic pleasure derived from the very activity of the mind when that activity manifests such shifts in level of psychic functioning. With these three contributions Kris outlined the direction in which psychoanalytic ego psychology must move in its efforts to conceptualize mediating processes of intrasystemic psychological functioning -- symbolic processes of imagination in the service of ego synthesis.

PART IV-A. ERIKSON'S OUTLINE OF DREAM ANALYSIS (1954) pp. 144-145

I. Manifest configurations
  a. verbal
    1. general linguistic quality
    2. spoken words and word play
  b. sensory
    1. general sensory quality, range and intensity
    2. specific sensory focus
  c. spatial
    1. general quality of extension
    2. dominant vectors
  d. temporal
    1. general quality of succession
    2. time perspective
  e. somatic
    1. general quality of body feeling
    2. body zones
    3. organ modes
  f. interpersonal
    1. general social grouping
    2. changing social vectors
    3. "object relations"
    4. points of identification
  g. affective
    1. quality of affective atmosphere
    2. inventory and range of affects
    3. points of change of affect
  h. summary: correlation of configurational trends

II. Links between manifest and latent dream material
  a. associations
  b. symbols

III. Analysis of latent dream material
  a. acute sleep-disturbing stimulus
  b. delayed stimulus (day residue)
  c. acute life conflicts
  d. dominant transference conflict
  e. repetitive conflicts
  f. associated basic childhood conflict
  g. common denominators (wishes, drives, needs)
  h. methods of defense, denial, and distortion

IV. Reconstruction
  a. life cycle
    1. present phase
    2. corresponding infantile phase
    3. defect, accident, or affliction

    - 4. psychosexual fixation
    - 5. psychosexual arrest
- b. social process: collective identiy
    - 1. ideal prototypes
    - 2. evil prototypes
    - 3. opportunities and barriers
- c. ego identity and lifeplan
    - 1. mechanisms of defense
    - 2. mechanisms of integration

PART IV-B. EXTENDED WORKSHEET FOR EPIGENETIC ANALYSIS OF MANIFEST DREAM REPORT. (JONES, 1962, p. 37)

Normal Growth Crises

1. Trust/Mistrust
2. Autonomy/Shame-Doubt
3. Initiative/Guilt
4. Industry/Inferiority
5. Identity and Repudiation/Identity Diffusion
6. Intimacy and Solidarity/Isolation
7. Generativity:Authority/Self-Absorption
8. Integrity/Despair

Psychosexual Zones	Psychosexual Modes	Psychosocial Zones	Psychosocial Modalities
1. Oral-Respiratory-Sensory-Kinesthetic	a. Passive Incorporative b. Active Incorporative	Maternal Person	a. To get b. To take
2. Anal-Urethral-Muscular	Retentive-Eliminative	Parental Persons	a. To hold (on) b. To let (go)
3. Infantile-Genital-Locomotor	Intrusive Inclusive	Basic Family	To "make" (going after) To "make like" (playing)
4. Cerebral-Cortical*	Trans-conceptual*	"Neighborhood" School Community*	To turn to* To know how* To make things (completing) To make things together
5. Autonomy-centric Organismic	Consolidative-conceptual* Intrusive-eliminative Inclusive-incorporative	Peer groups and Outgroups; Models of leadership	To be (Oneself) ((or not to be)) To share being oneself

Psychosexual Zones	Psychosexual Modes	Psychosocial Zones	Psychosocial Modalities
6. Homonomy-centric* Organism	Integrative-conceptual Introductive Receptive	Partners in friendship, sex, competition a. heterosexual b. homosexual	To lose and find oneself in another To have and hold* (protect) To have and yield* (give in-produce)
7. Germinal-organismic*	Conceptual* Preceptive Inceptive	Divided labor and shared household	To let be* To make be To take care of
8. Cosmic-organismic*	Transcendental*	"Mankind" "My Kind"	To be through having been; To face not being To be a has been*

*Modification or extension of Erikson's worksheet

PART V. METAPHOR AND FIGURATIVE SPEECH (EMPSON, 1930)

Empson's seven types of ambiguity move from relative simplicity to increasing complexity (cf. Hyman, 1955) - from the construal of language as a code system with dictionary definitions for each component of the code to a construal of language as a system of symbols within which meaning is a complex function of transaction between focal and contextual dimensions (cf. Kris, 1948). His specific types depend in large measure for their significance upon the immediate context of his poetic analysis. In fact, he does not actually provide a formal definition of each. However, using his own contextual insights, as well as paraphrases that have been offered by others, we can outline seven levels of increasing complexity that have potential significance for the present study.

1. When a figure of speech while making one explicit statement, is effective within its immediate context in two or more additional ways at once. (simultaneous)
2. When two or more possible meanings of a figure of speech combine to produce a single meaning that "makes sense" within its immediate context of usage. (conjunctive)
3. When two or more ideas, which are connected only by being both relevant in the immediate context, are expressed simultaneously in a single figure of speech. (alternative)
4. When two or more possible meanings of a figure of speech, while inconsistent or in conflict, combine to make clear a more complicated tacit state of mind in the speaker and/or audience. (disjunctive)
5. When a figure of speech has no discernable meaning relevant within the immediate context but stands half way between two meanings as the speaker (writer) is in the act of moving from one to the other. (transitional)
6. When a figure of speech apparently says nothing, by tautology, by contradiction, by irrelevant statements, leads the hearer or reader to invent statements which give indirect expression to conflict or confusion. (projective)
7. When two or more possible meanings of a figure of speech give expression to the extreme divergencies of meaning defined by the context of discussion and thus represent a statement of integration and discontinuity -- give expression, that is, to a division in the mind, at one level, and to a capacity to transcend without dissolving that discontinuity at another level. (integrative)

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